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ABSTRACT

The goal of the Conecuh County (Alabama) project was to successfully implement into its curriculum an Experience-Based Career Education (EBCE) program based on the model developed by Northwest Regional Educational Laboratory, which integrates academic requirements and work experience opportunities into a comprehensive curriculum. To determine program effectiveness, a third-party evaluation team developed an evaluation plan which would compare the EBCE participants and a control group in the following areas: basic academic skills, mastery in career knowledge, career maturity, attitudes toward learning environments, sex-role stereotyping, and internally oriented locus of control. Assessment instruments were administered on a pretest/posttest basis. Parents and employers were also surveyed to determine their attitudes toward the program. EBCE student accomplishments appeared to be substantial. Measured growth in basic skills was equivalent to that experienced by comparison students in traditional high schools. EBCE students' attitudes toward the various aspects of the learning environment, career knowledge, work, and career maturity were significantly more positive than comparison students. EBCE students showed significant gains in reducing their sex-role stereotyping but not in increasing their internal locus of control. However, unobtrusive assessment indicated that EBCE students were displaying more maturity and accepting responsibility more readily. Finally, the perceptions and attitudes of parents, employers, and EBCE staff were positively oriented. (BM)

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ED164853

FINAL EVALUATION REPORT

for the

Conecuh County Part D

Experience-Based Career Education Program

Evergreen, Alabama

Project No. 502-AH6-0066

Grant No. G04-76-03000

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August, 1978

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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This Final Evaluation Report has been produced through the efforts of numerous individuals. Conecuh County EBCE Program personnel contributed significantly to the successful completion of many evaluation data collection activities. They coordinated the data collection from their EBCE students and comparison students. Rose Peterson was responsible for aggregation and coding of all student evaluation data. Final typing of this report and substantial editing was completed by Carolyn Davis, who also provided substantial input to the aggregation and coding of parent, experience site personnel, and EBCE staff responses.

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FINAL EVALUATION

The implementation and operation of an EBCE program requires evaluation activities to provide quantitative and qualitative evidence of an efficient and effective product. Both the National Institute of Education (NIE) and the United States Office of Education (USOE) require evaluation as a contingency for funding; specifically, the USOE requires that evaluation activities be conducted on Part D demonstration grants by an independent third-party evaluator. Conecuh County again selected the Appalachia Educational Laboratory (AEL) as the agency to conduct the comprehensive and objective evaluation of their program installation and operation.

Evaluation Plan

An EBCE evaluation plan was developed which delineated procedures pertinent to developing valid and reliable evidence regarding product effectiveness for purposes of decision-making. The evaluation plan presented the specific techniques and analytical procedures to be used in treating the data collected during the second year of program operation.

Design

In order that a rigorous and valid evaluation be conducted, it was necessary to establish a non-EBCE group whereby appropriate comparisons may be made. This non-EBCE comparison group was comprised of a random sample of traditional students, some of whom participated in the recruitment process but were not selected for matriculation into the program. The establishment of this non-EBCE group provided for eventual data analysis.

Goals and Objectives

The major goal of Conecuh County was to successfully implement an EBCE program into its curricula offerings. Associated with this major goal were several outcome objectives associated with the primary impact group (students) and with the secondary impact groups (experience site personnel, parents, and EBCE staff).

Primary Hypotheses. The following major hypotheses were tested under experimental design conditions. All dealt with one year's effects of the EBCE Program:

1. Experimental students (E1) will do as well in basic academic skills as comparison students (C1) in a traditional high school.
2. Experimental students (E1) will acquire significantly greater ($p < .10$) mastery in career knowledge than comparison students (C1) in a traditional high school.
3. Experimental students (E1) will acquire significantly greater ($p < .10$) career maturity than comparison students (C1) in a traditional high school.
4. Experimental students (E1) will develop significantly more positive ($p < .10$) attitudes toward learning environments than comparison students (C1) in a traditional high school.
5. Experimental students (E1) will develop significantly less ($p < .10$) sex-role stereotyping than comparison students (C1) in a traditional high school.
6. Experimental students (E1) will develop significantly more ($p < .10$) internally oriented locus of control than students in a traditional high school.

Instrumentation. The following instruments were utilized in pre/post testing each of the above stated hypotheses:

1. The Comprehensive Tests of Basic Skills (CTBS) provided an assessment of the extent to which the students developed basic academic skills. Two subtests (at Level 4, Form S) were utilized. They were the Reading Comprehension and Mathematics Concepts and Applications subtests. (Appendix A)
2. The second subtest of the Student Attitude Survey (SAS) deals with career knowledge and planning and was used to test the related hypothesis. (Appendix B)
3. The New Mexico Career Oriented Activities Checklist (NMCOAC) was used to measure students' career maturity and involvement in the career choice process. (Appendix C)
4. The Assessment of Student Attitudes (ASA) is the first subtest of the Student Attitude Survey (SAS) and was used to provide an assessment of student attitudes toward various aspects of schooling and the total learning environment.
5. The JOBS instrument was utilized to measure the degree to which sex-role stereotyping occurred. (Appendix D)
6. The Nowicki-Strickland (ANS-IE) was used to measure the change of internal versus external locus of control. (Appendix E)

The Student Information Questionnaire (SIQ) was utilized to obtain basic demographic data about the students and was administered only on a pre-test basis. (Appendix F)

Testing Schedule. Based on the experimental design being utilized in this study, both EBCE and comparison students were pretested at the beginning of the school year. Students exiting the program at the end of the year were posttested. Since Conecuh County operates on semesters (18 weeks each), some students pretested in the fall opted out of the program at the end of the first semester; other students opted out at various points throughout the school year. Posttests were not administered to these early exiting students.

Data Analyses. Based on the experimental design being utilized, appropriate statistical analyses were selected and conducted to test the main effects associated with each hypothesis. These analyses are listed below and are numerically keyed to hypotheses.

1. Descriptive statistics and analysis of variance (or covariance) on CTBS scores of E1 and C1 groups.
2. Descriptive statistics and analysis of variance (or covariance) on SAS Part II scores on E1 and C1 groups.
3. Descriptive statistics and analysis of variance (or covariance) on NMCOAC scores of E1 and C1 groups.
4. Descriptive statistics and analysis of variance (or covariance) on SAS Part I scores of E1 and C1 groups.
5. Descriptive statistics and analysis of variance (or covariance) on JOBS scores of E1 and C1 students.
6. Descriptive statistics and analysis of variance (or covariance) on ANS-IE scores of E1 and C1 students.

Secondary Hypotheses. Parents and employers were also administered appropriate assessment instruments to determine their attitudes toward the EBCE program. The following hypotheses associated with these topic areas were investigated:

7. Parents of EBCE students will have positive attitudes toward the EBCE Program.
8. Various levels of employers (i.e., community instructors, certifiers) will have positive attitudes toward the EBCE Program.

Instrumentation. The following instruments were used to investigate each of the above hypothesis.

7. The Parent Opinion Survey was utilized to assess parents' attitudes toward the EBCE Program. (Appendix G)
8. The Employer Questionnaire was utilized to assess experience site personnel's attitudes toward the EBCE program as it was implemented at their site. (Appendix H)

Testing Schedule. Employers and parents received their questionnaire only at the end of the testing period (since these assessments were directed at operation characteristics, pretesting could be based on an empty set of experiences). These questionnaires/surveys were mailed to the parents and employers with instructions for completing the forms and returning them in stamped self-addressed envelopes.

Data Analyses. Statistical analyses were also selected and conducted to test these secondary hypotheses. These analyses are listed below and again are numerically keyed to hypotheses.

7. Descriptive statistics of parent opinion survey.

8. Descriptive statistics of employer questionnaire.

Additional Procedures

Information not related to respondent group outcomes was also collected and analyzed. Input on process objectives and other aspects of program implementation and operation was obtained from/provided to EBCE staff on an informal basis throughout the year. End of year EBCE staff perceptions were also obtained using the EBCE Staff Questionnaire. (Appendix I)

RESULTS

During year two of operation, Co..ecuh County again became involved in a system of mutual adaptations -- a process of modification of the NWREL/EBCE model and of the local implementation site. Both state and local needs and constraints were taken into consideration as the program was operated and revised. These adaptations hopefully impacted students, parents, experience site personnel, and the EBCE staff. Thus, impact data will be presented in the following order: student demographic data; student outcome data; parent, experience site personnel, and EBCE staff perceptions/opinions; and evaluator comments/insights about the implementation/operation/demonstration/dissemination/institutionalization process.

Student Demographic Data

Although partial data were available on many students, relatively complete sets of data were available on 42 E1 students, and 48 C1 students. Table 1 presents the demographic data obtained on the SIQ.

Table 1

From Table 1 it can be seen that there were more females than males enrolled in EBCE (67%), but about the same percentage (63%) of the comparison group were males. Over half (57%) of the EBCE students were white; for the comparison students, however, 48% were white. While Conecuh County did not utilize sophomores in their programs, 50% of the full year EBCE students were seniors; for the comparison group only 44% were seniors.

Two-thirds (67%) of the EBCE students' fathers had less than a high school education, 10% had a high school education, and only 19% had some post-secondary education. No data were available on two fathers. For

Table 1

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	n =	E 42	C 48
Sex			
Male		14	30
Female		28	18
Ethnic Group			
White		24	23
Black		18	25
Other			
Grade			
12th		21	21
11th		21	27
Father's Education			
Less than High School		28	31
High School		4	8
More than High School		8	3
Missing		2	6
Mother's Education			
Less than High School		22	24
High School		13	15
More than High School		6	3
Missing		1	6
Number of Sibling Dropouts			
None		23	25
One		11	10
Two or more		7	8
Missing		1	5

Variable	n =	E 42	C 48
Long-range Goals			
Clerical		7	5
Craftsman		3	9
Farmer		0	3
Homemaker		2	2
Laborer		0	3
Manager		0	1
Military		3	4
Operative		1	1
Professional		12	7
Proprietor		1	1
Protective Service		0	2
Sales		0	0
Service		1	1
Technical		4	2
Other		0	2
Don't Know		8	5
Expectation one year later			
Working full-time		16	23
Entering OJT		0	2
Military		7	3
Homemaker		0	0
Vocational School		5	7
Academics - Jun./Comm. Coll.		4	3
Tech/Voc. - Jun./Comm. Coll.		2	3
4-Year College/University		3	6
Working part-time		1	1
Other		1	0
Missing		3	0

Table 1 (Cont'd)

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	E	C	Variable	E	C
n =	42	48	n =	42	48
Major field of study			Mother's Occupation		
General	18	18	Clerical	2	5
Voc. Ed.	13	9	Craftsman	0	1
College Prep.	6	16	Farmer	1	0
Other	1	2	Homemaker	20	16
Missing	4	3	Laborer	2	1
			Manager	2	0
Father's Occupation			Military	0	0
Clerical	0	0	Operative	7	4
Craftsman	10	11	Professional	1	3
Farmer	8	6	Proprietor	3	0
Homemaker	0	0	Protective Service	0	0
Laborer	9	9	Sales	0	2
Manager	0	1	Service	2	6
Military	0	2	Technical	0	0
Operative	10	8	Missing	2	10
Professional	1	1			
Proprietor	0	0			
Protective Service	0	1			
Sales	0	0			
Service	0	0			
Technical	2	1			
Missing	2	8			

comparison students, 65% of the fathers had less than a high school education, 17% had a high school education, and only 6% had some post-secondary education. No data were available on six fathers (13%). For the mothers of EBCE students, 52% had less than a high school education, nearly 31% had a high school education, and only 14% had some post-secondary education. No data were available on one mother. For the mothers of comparison students, 50% had less than a high school education, 31% had a high school education, and only 6% had some post-secondary education. No data were available on six mothers (13%). Thus the parental educational levels of EBCE students and comparison students were relatively similar.

In terms of the number of siblings who dropped out of school, 55% of the EBCE students indicated that they had had no siblings who dropped out, 26% indicated one sibling dropout, and 17% indicated two or more sibling dropouts. For the comparison students 52% also indicated no siblings who had dropped out of school, 21% indicated one sibling dropout, and 17% indicated two or more sibling dropouts.

In response to the SIQ question on the long-range goals, 31% of the EBCE students indicated PROPRIETOR or PROFESSIONAL goals, 19% indicated that they didn't know their long-range goals, and 33% indicated TECHNICAL, CRAFTSMAN, or CLERICAL long-range toals. Of the comparison students 17% indicated MANAGERIAL or PROFESSIONAL goals, 33% indicated CRAFTSMAN, CLERICAL, or TECHNICAL goals, and 10% indicated no knowledge of long-range goals. Not one of the EBCE students indicated a long-range goal of being a farmer or farm-manager.

Only 7% of the EBCE students expected to be attending a four-year college or university one year after completing high school, 38% expected

Table 1 (Cont'd)

Demographic Frequency (SIQ) of EBCE and Comparison Students

Variable	n =	E 42	C 48	Variable	n =	E 42	C 48
Major field of study				Mother's Occupation			
General		18	18	Clerical		2	5
Voc. Ed.		13	9	Craftsman		0	1
College Prep.		6	16	Farmer		1	0
Other		1	2	Homemaker		20	16
Missing		4	3	Laborer		2	1
				Manager		2	0
Father's Occupation				Military		0	0
Clerical		0	0	Operative		7	4
Craftsman		10	11	Professional		1	3
Farmer		8	6	Proprietor		3	0
Homemaker		0	0	Protective Service		0	0
Laborer		9	9	Sales		0	1
Manager		0	1	Service		2	6
Military		0	2	Technical		0	0
Operative		10	8	Missing		2	10
Professional		1	1				
Proprietor		0	0				
Protective Service		0	1				
Sales		0	0				
Service		0	0				
Technical		2	1				
Missing		2	8				

comparison students, 65% of the fathers had less than a high school education, 17% had a high school education, and only 6% had some post-secondary education. No data were available on six fathers (13%). For the mothers of EBCE students, 52% had less than a high school education, nearly 31% had a high school education, and only 14% had some post-secondary education. No data were available on one mother. For the mothers of comparison students, 50% had less than a high school education, 31% had a high school education, and only 6% had some post-secondary education. No data were available on six mothers (13%). Thus the parental educational levels of EBCE students and comparison students were relatively similar.

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In response to the SIQ question on the long-range goals, 31% of the EBCE students indicated PROPRIETOR or PROFESSIONAL goals, 19% indicated that they didn't know their long-range goals, and 33% indicated TECHNICAL, CRAFTSMAN, or CLERICAL long-range toals. Of the comparison students 17% indicated MANAGERIAL or PROFESSIONAL goals, 33% indicated CRAFTSMAN, CLERICAL, or TECHNICAL goals, and 10% indicated no knowledge of long-range goals. Not one of the EBCE students indicated a long-range goal of being a farmer or farm-manager.

Only 7% of the EBCE students expected to be attending a four-year college or university one year after completing high school, 38% expected

to be working full-time, 26% expected to be attending or taking courses at a vocational, technical, trade, or business school or at a junior college and 17% expected to be in the military. Over 12% of the comparison students expected to be attending a four-year college or university one year after completing high school, over 27% expected to be involved with courses at a vocational, technical, or business school, and nearly 48% expected to be working full-time. Although over one-half of the respondents were female, not one of the EBCE or comparison students indicated that they expected to be a homemaker or housewife one year after completing high school.

Over 42% of the EBCE students were enrolled in a general curriculum field of study but only 14% were enrolled in a college preparatory curriculum. Over 27% were enrolled in a vocational education curriculum. Of the comparison students over 37% were enrolled in a general curriculum, over 33% were enrolled in a college preparatory curriculum, and nearly 19% were enrolled in a vocational education curriculum.

Over 69% of the EBCE students' fathers were employed as laborers, craftsmen, or operatives; 19% were in farming. Over 58% of the comparison students' fathers were employed as laborers, craftsmen, or operatives; nearly 13% were in farming; but 17% of the data on fathers' occupations was missing. Thus fathers of EBCE and comparison students were primarily engaged as laborers, craftsmen, or operatives; the next major occupational category for both groups was farming.

Nearly 48% of the mothers of EBCE students were homemakers or housewives; over 21% were employed as operatives or laborers; and 14% were in professional administrative, or proprietary positions. Over 33% of the

mothers of comparison students were homemakers or housewives; only 6% were employed in professional positions; nearly 23% were employed in clerical, operative, labor, or craftsman positions, and 17% were in sales/service. (No data were available on 10 mothers - 21%.) Thus mothers of EBCE and comparison students were similarly represented in the various occupational groupings, except that more EBCE mothers were homemakers.

In summary, demographic data indicate that EBCE and comparison students were very similar as a group in terms of race, grade level, parents education, long-range goals, short term goals, and number of siblings who dropped out of school. Mothers' occupations, sex of students, and field of study showed the greatest differences.

Outcome Data

The impact and effect of the EBCE program on various respondent groups was determined by testing a number of hypotheses. The format of this section is to state each hypothesis, give the source of the data collected to test the hypothesis and the procedure used for hypothesis testing, a description of the findings, and a summary. While pertinent data is presented within each section, complete analysis of variance (ANOVA) and analysis of covariance (ANCOVA) tables are presented in Appendix J.

Hypothesis 1

The first hypothesis associated with student outcome data related to basic skills performance: EBCE students (E) will do as well in basic academic skills as comparison students (C) in a traditional high school. Data used to evaluate the first hypothesis were students' scores on the

Reading Comprehension (RC), Mathematics Concepts (MC) and Mathematics Applications (MA) subtests of the CTBS battery. An analysis of variance (ANOVA) procedure was utilized to test the hypothesis about basic academic skills.

Table 2 presents the statistics on the CTBS outcomes.

Table 2

Data presented in Table 2 indicate that there were no significant pretest differences between the two groups on any of the three subtests. Similarly, there were no significant differences at the posttest period. Based on the data presented in Table 2 and statistical analyses, the first hypothesis was not rejected. The EBCE students did do as well in basic academic skills as comparison students enrolled in a traditional high school.

Figure 1 graphically displays the test results.

Figure 1

From Figure 1 it can be visually seen that EBCE students showed positive growth in reading comprehension and math applications, whereas they showed a slight decline in math concepts.

Hypothesis 2

The second student outcome hypothesis related to acquisition of career knowledge: EBCE students will acquire significantly greater mastery in career knowledge than comparison students in a traditional high school.

Table 2

CTBS Data

	E1 - pre	C1 - pre	E1 - post	C1 - post
Reading Comprehension (45 items)				
n	42	46	42	46
$\bar{X}$	23.4	22.5	24.1	22.2
s	7.6	10.4	8.0	11.0
range	10-38	6-42	9-41	2-42
F	0.18		0.89	
p	nsd		nsd	
Mathematics Concepts (25 items)				
n	42	46	42	46
$\bar{X}$	12.7	12.5	12.2	13.0
s	4.5	5.4	5.1	6.0
range	5-22	4-23	1-20	4-25
F	0.02		0.46	
p	nsd		nds	
Mathematics Applications (25 items)				
n	42	46	42	46
$\bar{X}$	10.2	10.2	10.5	11.9
s	4.8	5.9	5.2	5.8
range	4-23	2-24	3-22	3-25
F	0.01		1.45	
p	nsd		nsd	

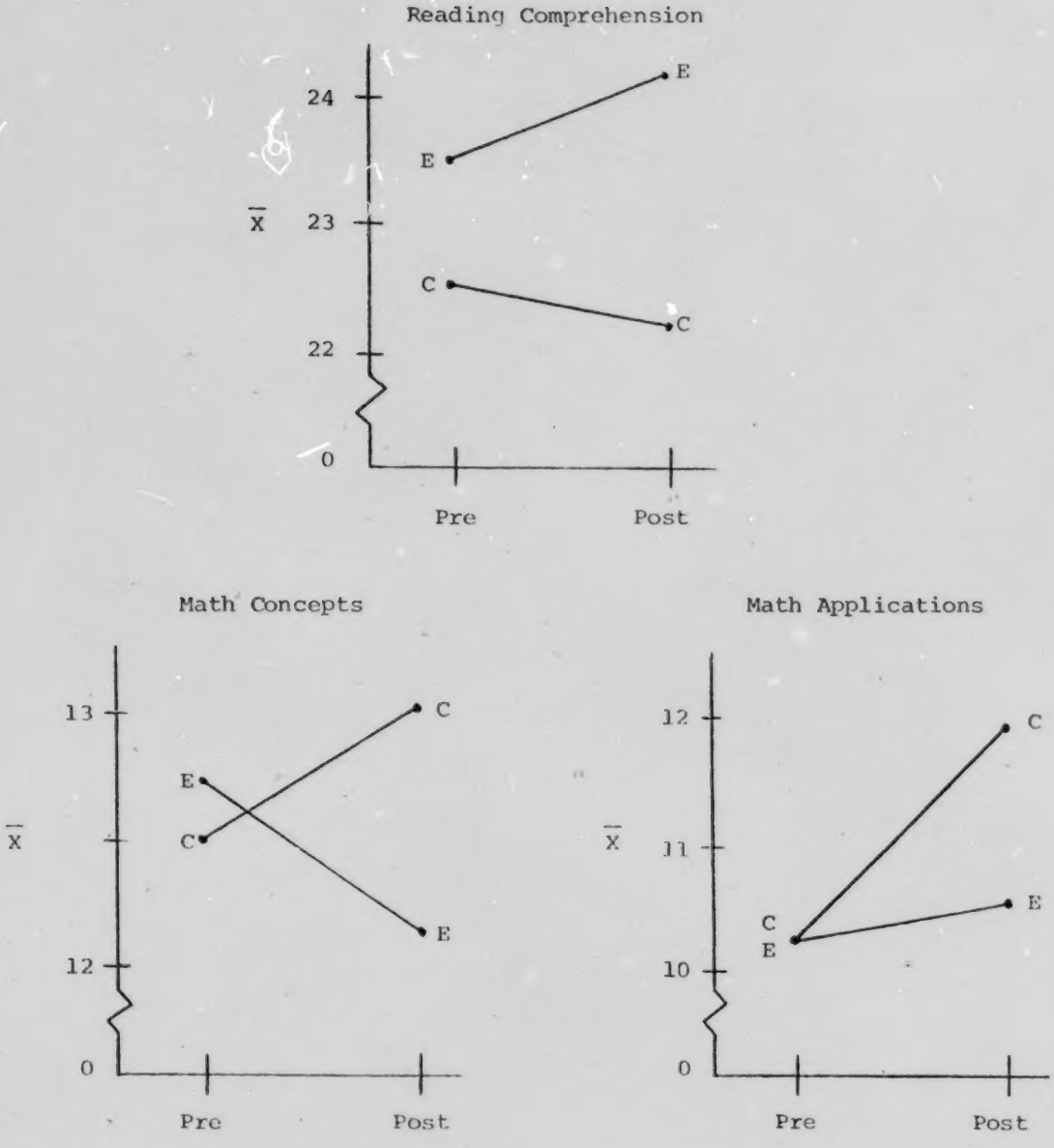

Figure 1

CTBS Data

Data used to test this hypothesis were students' scores on the second subtest of the SAS. This second subtest not only provided a composite score (attitude toward Work) but also two partial scores: career knowledge and career planning. An analysis of variance (ANOVA) procedure was utilized to test the second hypothesis.

Table 3 presents the statistics on the SAS - Part 2 outcomes.

Table 3

Statistics presented in Table 3 indicate that the EBCE and comparison students had equivalent scores on both of the subsections and the composite at the pretest period. Subsequently, EBCE students scored significantly higher on both of the subsections and the composite total. Thus based on the data presented in Table 3 and on subsequent statistical analyses, the second hypothesis was not rejected. The EBCE students did acquire significantly greater mastery in career knowledge than did comparison students. This positive result was also reflected in career planning and the composite Work score.

Figure 2 graphically displays the test results from the SAS - Part 2.

Figure 2

From Figure 2 it can visually be seen that EBCE students showed positive growth in career knowledge, career planning, and composite attitude towards work; whereas, comparison students showed only very slight growth in career knowledge, career planning, and the composite attitude towards work.

Table 3

SAS - Part 2 Data

	E1 - pre	C1 - pre	E1 - post	C1 - post
Career Knowledge (12-60 points)				
n	42	48	42	48
$\bar{X}$	42.3	43.8	49.2	44.4
s	7.0	6.9	7.0	5.3
range	31-57	28-59	34-60	35-57
F	1.11		13.78*	
p	nsd		.001	
Career Planning (10-50 points)				
n	42	48	42	48
$\bar{X}$	37.8	37.5	40.6	38.0
s	4.1	4.7	5.5	5.1
range	29-48	29-50	28-49	25-50
F	0.08		5.29**	
p	nsd		.05	
Work (22-110 points)				
n	42	48	42	48
$\bar{X}$	80.1	81.3	89.8	82.4
s	10.7	10.5	11.9	9.5
range	63-99	63-109	65-109	60-103
F	0.32		10.77***	
p	nsd		.01	

*$F_{.001}(1,88) = 11.69$ **$F_{.05}(1,88) = 3.96$ ***$F_{.01}(1,88) = 6.97$

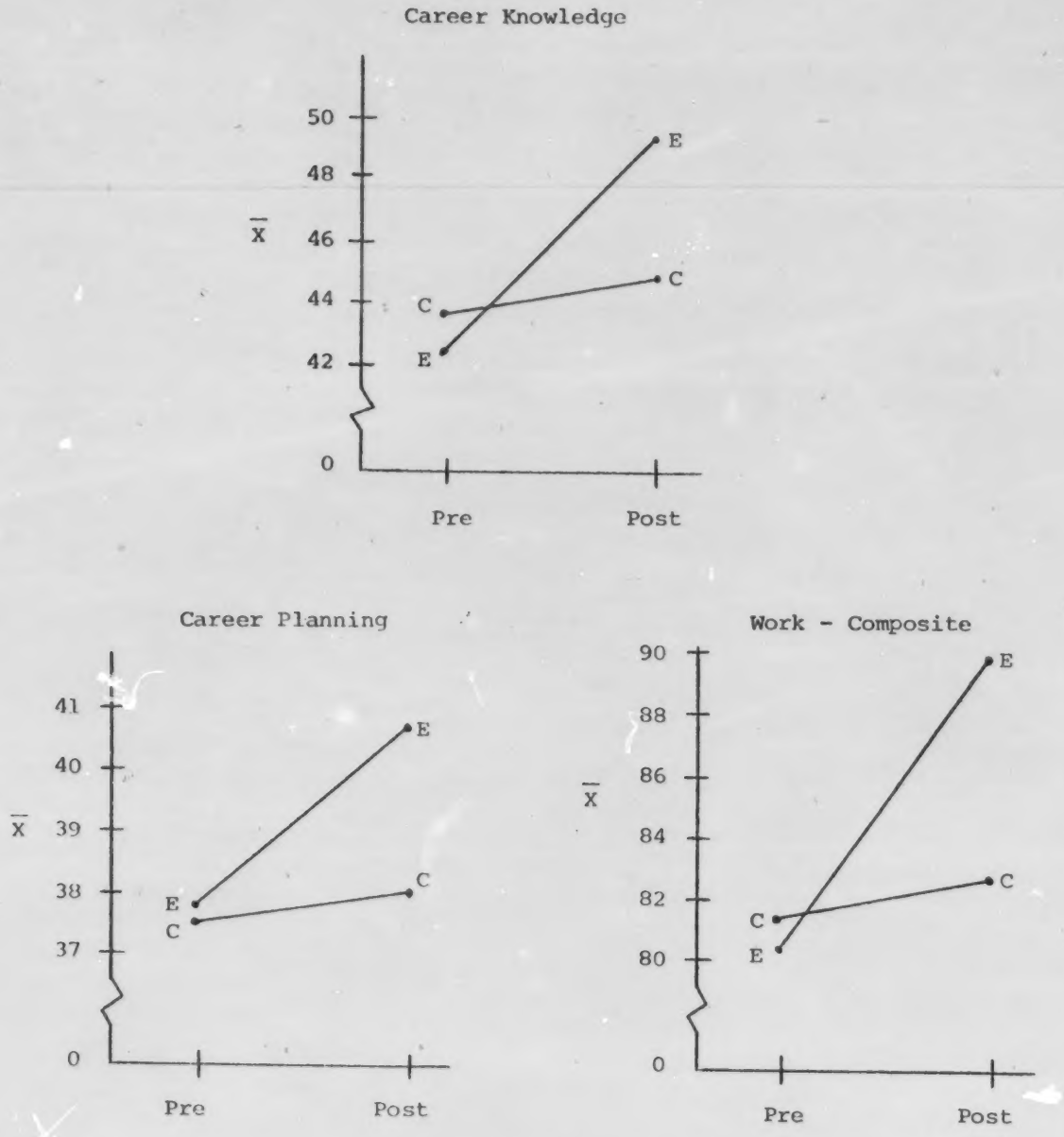

Figure 2

SAS - Part 2 Data

Hypothesis 3

The third hypothesis associated with student outcome data related to career maturity: EBCE students will acquire significantly greater career maturity than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on the NMCOAC. An analysis of variance (ANOVA) procedure was utilized to test the third hypothesis.

Table 4 presents the statistics on the NMCOAC outcomes.

Table 4

Statistics presented in Table 4 indicate that the EBCE and comparison students had equivalent scores on the pretest. However, EBCE students had significantly more positive scores on the posttest. Thus, based on this data and the statistical analyses, the third hypothesis was not rejected. The EBCE students did acquire significantly greater career maturity than comparison students.

Figure 3 graphically displays the test results from the NMCOAC.

Figure 3

From Figure 3 it can visually be seen that EBCE students showed a greater positive growth in career maturity than did the comparison students, who displayed only a slight growth in career maturity.

Hypothesis 4

The fourth student outcome hypothesis related to attitudes toward learning environments: EBCE students will develop significantly more

Table 4

NMCOAC Data

(0-69 points)

	E1 - pre	C1 - pre	E1 - post	C1 - post
n	42	46	42	46
$\bar{X}$	21.6	19.7	26.9	22.8
s	8.1	5.4	9.7	6.4
range	7-41	9-36	3-44	7-43
F	1.84		5.55*	
p	nsd		.05	

*$F_{.05}(1,86) = 3.96$

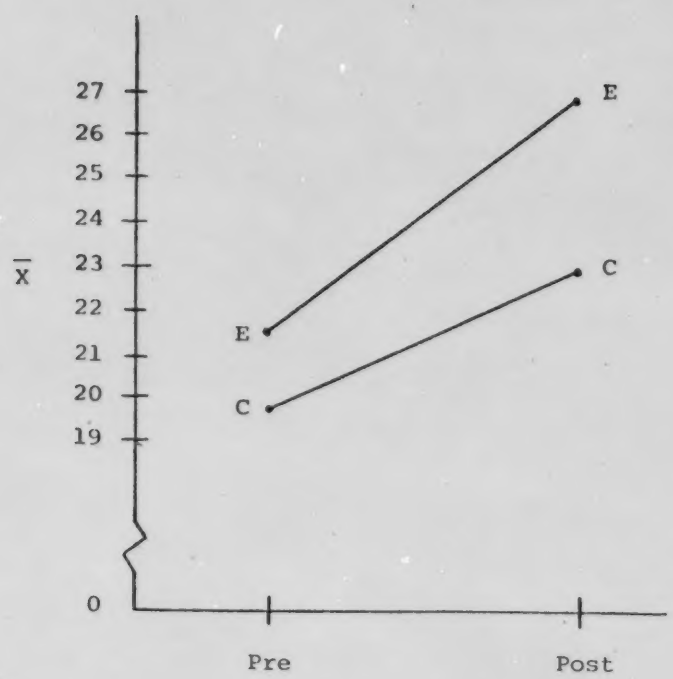

Figure 3

NMCOAC Data

positive attitudes toward learning environments than comparison students in a traditional high school. Data used to test this hypothesis were students' scores on Part 1 of the SAS. Part 1 of the SAS yields five different scores: attitude toward education in general, school curriculum, school resources, school counseling, and overall learning environment (composite). Analysis of variance (ANOVA) and covariance (ANCOVA) were used to test the fourth hypothesis.

Table 5 presents the statistics on the five outcomes of Part 1 of the SAS.

Table 5

Data and statistics presented in Table 5 indicated that an analysis of covariance procedure was necessary for three scores, since mean scores on the pretests (E vs C) were significantly different. On all five sets of pretest data the comparison students obtained higher scores than did the EBCE students. However, on all five sets of posttest data the EBCE students had significantly higher scores than did the comparison students.

Figure 4 graphically displays the test results for the five subscales of Part 1 of the SAS.

Figure 4

From Figure 4 it can visually be seen that EBCE students made great positive gains on all five subparts, whereas comparison students' scores declined on three subparts (one subpart had no change). Thus based on the data presented

Table 5

SAS - Part 1 Data

	El - pre	Cl - pre	El - post	Cl - post	Adjusted El-post	Adjusted Cl-post
Part a - Education in General (7-35 points)						
n	42	48	42	48		
$\bar{X}$	22.1	23.8	28.4	24.1		
s	6.1	4.7	4.0	4.4		
range	11-35	15-35	19-35	13-32		
F	2.03		23.06*			
p	nsd		.0001			
Part b - School Curriculum (5-25 points)						
n	42	48	42	48		
$\bar{X}$	17.2	18.7	20.7	18.6	21.1	18.1
s	3.9	2.8	2.4	3.2		
range	10-25	12-25	16-25	11-25		
F	4.21**		12.52***			95.02$^{**}_{**}$
p	.05		.001			.0001
Part c - School Resources (9-45 points)						
n	42	48	42	48		
$\bar{X}$	26.9	29.4	36.9	28.9	37.0	28.8
s	6.8	5.5	5.8	6.1		
range	13-45	16-38	21-45	15-41		
F	3.82$^{*}_{**}$		40.17*			40.35$^{**}_{**}$
p	.10		.0001			.0001

*$F_{.0001}(1,88) = 16.82$ ***$F_{.001}(1,88) = 11.69$ $^{*}_{**}F_{.10}(1,88) = 2.77$

**$F_{.05}(1,88) = 3.96$ $^{**}_{**}F_{.0001}(1,87) = 16.82$

Table 5 (cont'd)

SAS - Part 1 Data

	El - pre	Cl - pre	El - post	Cl - post	Adjusted El-post	Adjusted Cl-post
Part d - School Counseling (5-25 points)						
n	42	48	42	48		
$\bar{X}$	13.4	14.0	19.1	14.0		
s	4.4	3.9	4.4	4.0		
range	5-22	7-21	11-25	5-23		
F	0.49		33.11*			
p	nsd		.0001			
Composite - Total Learning Environment (26-130 points)						
n	42	48	42	48		
$\bar{X}$	79.7	85.9	105.1	85.6	105.7	85.0
s	18.3	13.4	13.2	14.3		
range	44-127	54-113	82-128	47-115		
F	3.44**		44.47*		50.85***	
p	.10		.0001		.0001	

*$F_{.0001}(1,88) = 16.82$ **$F_{.10}(1,88) = 2.77$ ***$F_{.0001}(1,87) = 16.82$

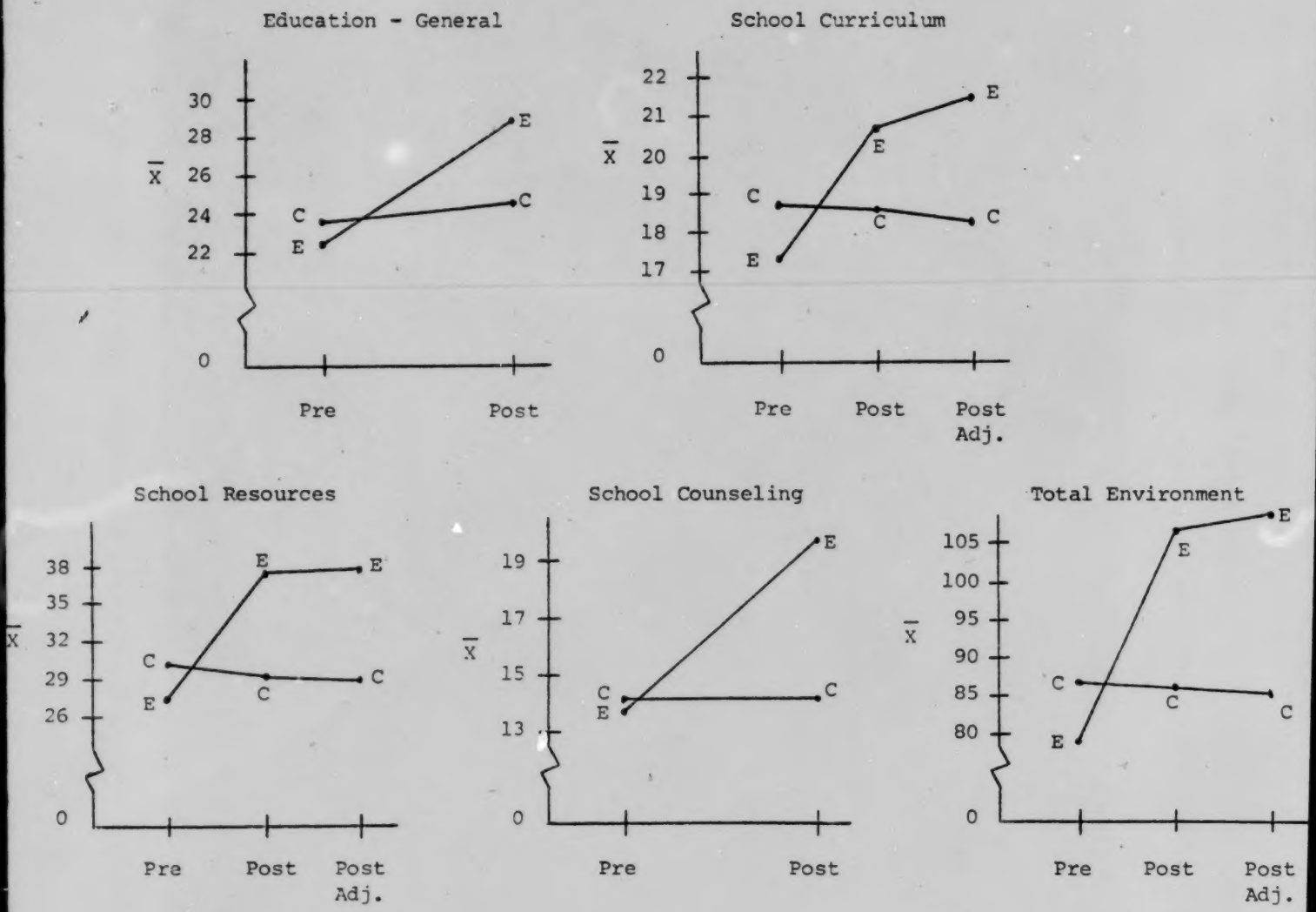

Figure 4

SAS - Part 1 Data

in Table 5 and visually displayed in Figure 4, the fourth hypothesis was not rejected. EBCE students did develop significantly more positive attitudes toward learning environments than did the comparison students.

Hypothesis 5

The fifth hypothesis associated with student outcome data related to sex-role stereotyping: EBCE students will develop significantly less sex-role stereotyping than comparison students in a traditional high school. Data used to evaluate the fifth hypothesis were students' scores on the JOBS instrument. Analysis of variance (ANOVA) procedures were utilized to test the fifth hypothesis.

Table 6 presents the data and statistics on the JOBS outcomes.

Table 6

The information presented in Table 6 indicates that the two groups were initially the same. When posttest scores were analyzed (using ANOVA) there were two significant differences. EBCE students were male-stereotyping significantly less than comparison students; this resulted in composite scores which indicate significantly less sex-stereotyping. Results indicate that EBCE students exhibited less sex-role stereotyping during the period that they were enrolled in EBCE. During the same period of time, the comparison students also exhibited less sex-role stereotyping, except for male stereotyping.

Figure 5 graphically displays the results from the JOBS scale.

Figure 5

Table 6

JOBS Data

	E1 - pre	C1 - pre	E1 - post	E1 - post
Men (0-30 points)				
n	42	48	42	48
$\bar{X}$	10.0	11.1	9.2	11.1
s	3.7	3.0	4.7	4.0
range	3-20	2-15	0-21	0-19
F	2.49		4.42*	
p	nsd		.05	
Women (0-30 points)				
n	42	48	42	48
$\bar{X}$	5.6	6.1	5.0	5.7
s	2.3	2.5	2.5	2.6
range	1-11	1-17	0-10	0-16
F	0.88		1.41	
p	nsd		nsd	
Both (0-30 points)				
n	42	48	42	48
$\bar{X}$	14.4	12.8	15.8	13.5
s	5.3	4.0	6.5	5.8
range	3-25	4-25	1-30	0-30
F	2.64		3.94**	
p	nsd		.10	

*$F_{.05}(1,88) = 3.96$ **$F_{.10}(1,88) = 2.77$

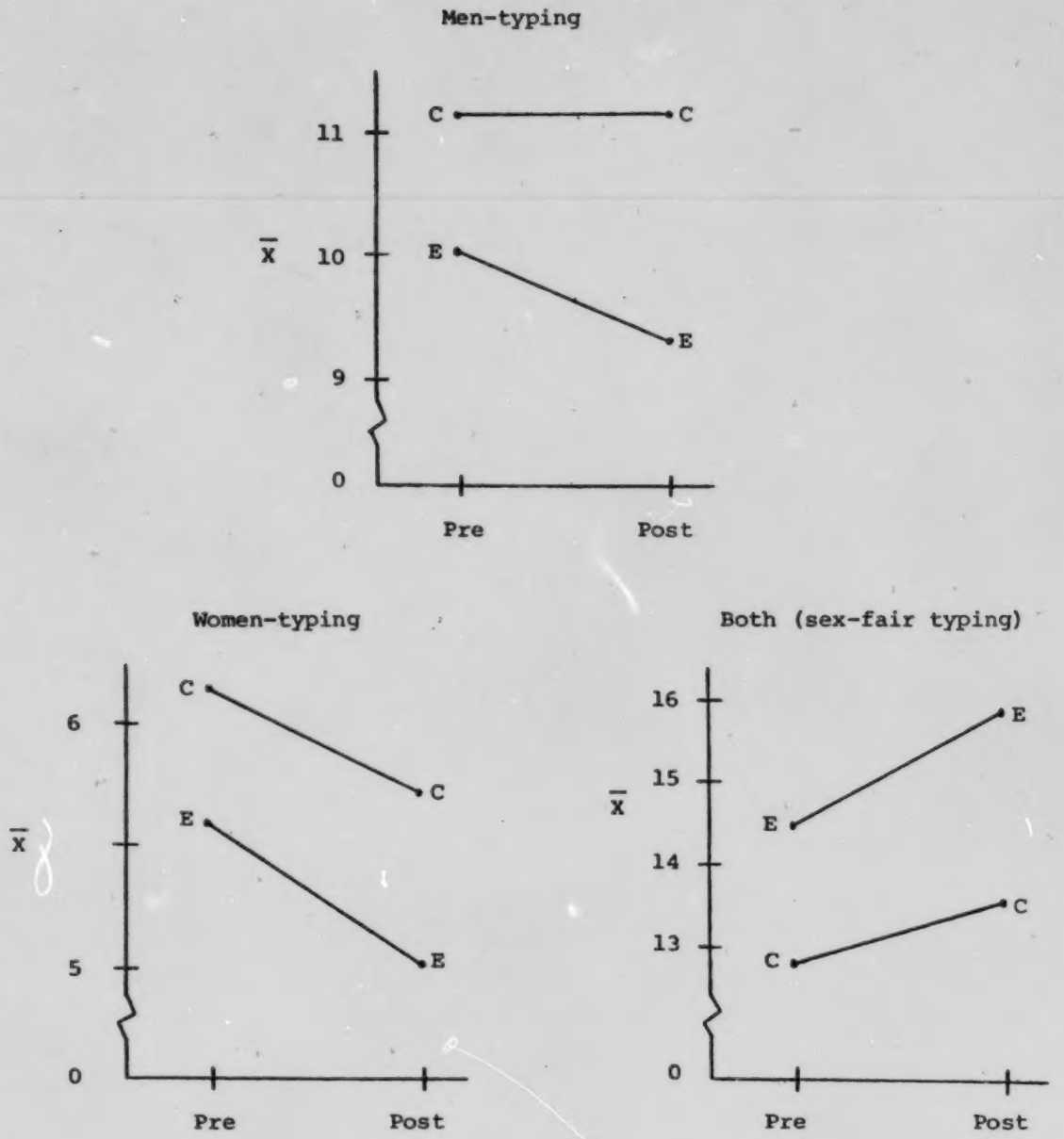

Figure 5

JOBS Data

From Figure 5 it can be seen that for the partial score related to stereotyping males EBCE exhibited progressively less over the time period; comparison scores remained constant. It can also be seen that EBCE and comparison students exhibited less female stereotyping over the time period. When one looks at the combined scores (sex-fair typing), it can therefore be seen that both EBCE and comparison students are stereotyping progressively less. Thus, the fifth hypothesis must not be rejected -- EBCE students did develop significantly less sex-role stereotyping than comparison students. Hence, the results of the EBCE program operation were favorable.

Hypothesis 6

The sixth hypothesis associated with student outcome data related to locus of control: EBCE students will develop significantly more internally (therefore less externally) oriented locus of control than comparison students. Data used to evaluate the sixth hypothesis were students' scores on the ANS-IE instrument. Analysis of variance (ANOVA) procedures were used to test the hypothesis.

Table 7 presents the data and statistics on the ANS-IE outcomes.

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Table 7

The data presented in Table 7 indicate that the two groups (E1 and C1) were initially equivalent -- EBCE students felt no more externally controlled than did their counterparts. By the end of the year, EBCE students felt no less internally oriented than did the comparison students.

Table 7

ANS-IE Data

(0-40 points)

	El - pre	Cl - pre	El - post	Cl - post
n	42	48	42	48
$\bar{X}$	13.9	13.7	13.4	13.0
s	4.4	5.0	5.2	6.0
range	5-24	1-24	3-24	2-25
F	0.04		0.12	
p	nsd		nsd	

Figure 6 graphically displays the results from the ANS-IE scale.

Figure 6

From Figure 6 it can be seen that EBCE students and the comparison students did reduce their perceptions of external control. Although the sixth hypothesis must be rejected -- EBCE students did not develop significantly more internal locus of control -- participation in the EBCE program does appear to increase internality and reduce externality. However, both groups appear to be initially and subsequently internally controlled.

Additional Student Hypotheses

Although not part of the overall evaluation plan, two additional research hypotheses were developed and student data were collected to test them. The first additional hypothesis related to attitude towards self: EBCE students will develop significantly more positive attitudes toward self than will comparison students in a traditional high school. The second additional hypothesis related to attitude of self towards others: EBCE students will develop significantly more positive attitudes toward others than will comparison students. Data used to test the first additional hypothesis were students' scores on Part 3 of the SAS and data used to test the second additional hypothesis were students' scores on Part 4 of the SAS. Analysis of variance (ANOVA) procedures were utilized to test each of the additional hypotheses.

Table 8 presents the statistics on the student outcomes on Part 3 and Part 4 of the SAS.

Table 8

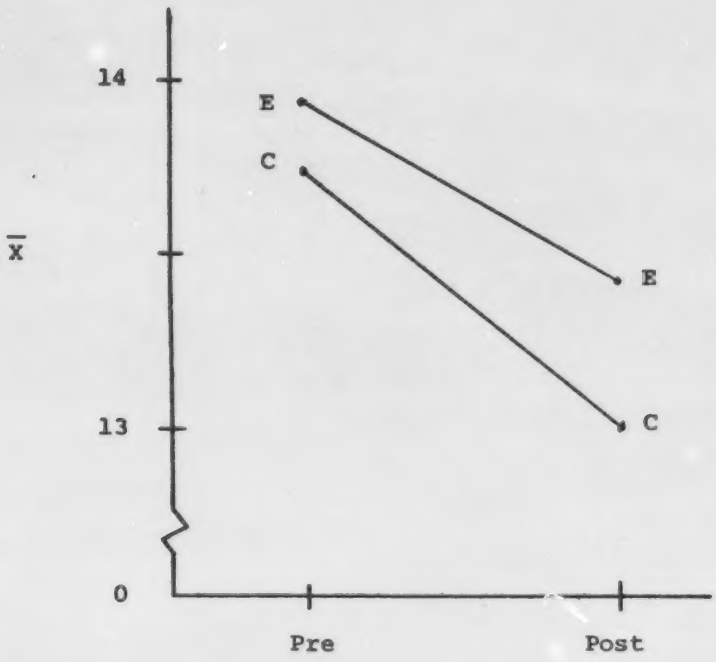


Figure 6

ANS-IE Data

Table 8

SAS - Parts 3 and 4 Data

SAS - Part 3: Self (19-95 points)	E1 - pre	C1 - pre	E1 - post	C1 - post
n	42	48	42	48
$\bar{X}$	68.1	67.9	71.2	69.3
s	11.4	10.9	13.5	9.6
range	43-93	51-89	28-94	48-93
F	0.00		0.62	
p	nsd		nsd	
SAS - Part 4: Others (13-65 points)				
n	42	48	42	48
$\bar{X}$	46.9	45.5	48.2	46.8
s	6.5	7.1	8.7	7.1
range	36-61	31-63	21-65	31-65
F	0.91		0.67	
p	nsd		nsd	

Data presented in Table 8 show that the EBCE and comparison students had equivalent pretest and posttest scores on both Parts 3 and 4 of the SAS. Both E1 and C1 students did show increases in their attitudes toward self and others.

Figure 7 graphically displays the test results from Part 3 (self) and Part 4 (other) of the SAS.

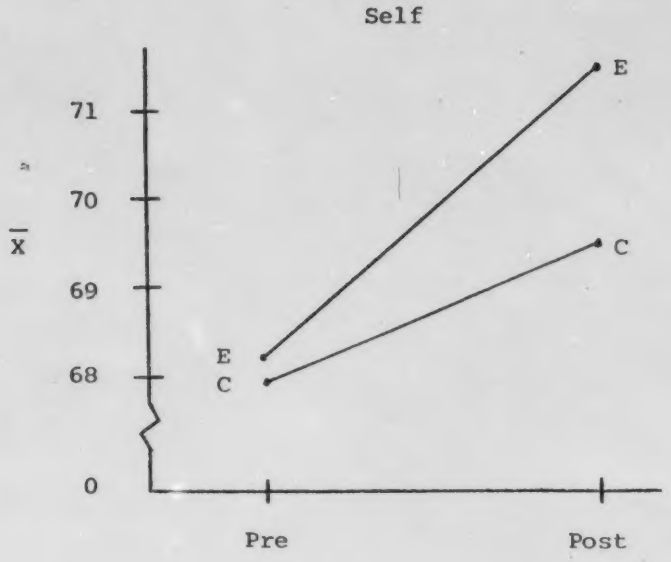
Figure 7

From Figure 7 it can be seen that EBCE students showed a slightly greater rate of positive growth in attitude toward self than did the comparison students. The EBCE students showed an equivalent positive growth in attitude towards others as the comparison students. However, the rate of growth of EBCE students was not sufficient to precipitate a significant posttest difference between the two groups. Both groups, however, appear to have very positive attitudes initially and subsequently.

Thus based on the data in Table 8 and Figure 7, the first additional hypothesis was rejected and the second additional hypothesis was also rejected. EBCE students did <u>not</u> develop significantly more positive attitudes toward self than did comparison students; similarly, EBCE students did <u>not</u> develop significantly more positive attitudes toward others.

Parent Data

Although students are the main respondent group impacted by the program, the parents of EBCE students also have an interest in the program. Their cooperation and support are essential for continued program operation.



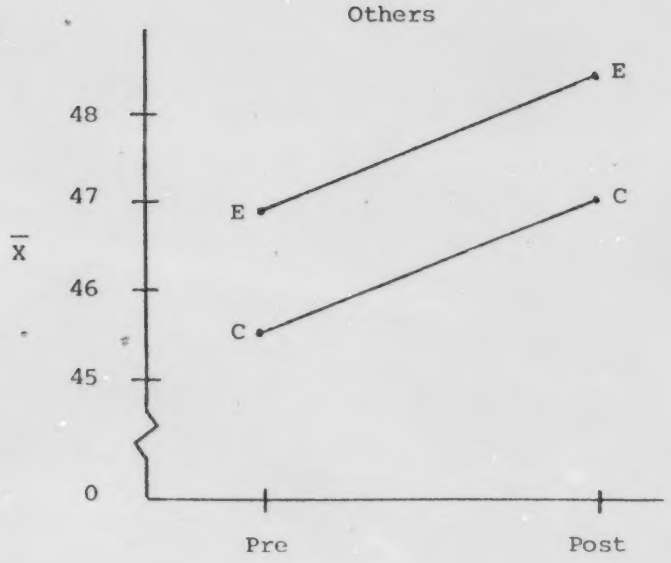


Figure 7

SAS - Parts 3 and 4

Hypothesis 7

The seventh hypothesis stated that parents of EBCE students would have positive attitudes toward the EBCE program. The data used to test this hypothesis were from the results of a Parent Opinion Survey which was mailed out to the parents of the 42 El students in May, 1978. Responses from 22 parents were received and tabulated.

Results

Most parents who responded were very positive towards all aspects of the EBCE program. Nearly all (95%) parents were enthusiastic about the amount of opportunity the career education program provided their sons and daughters for learning about occupations. Over two-thirds (68%) of the parents felt that EBCE offered their children more opportunity for general learning; 82% of the parents rated the approaches to learning used in the EBCE program as very good or excellent.

Nearly 91% thought that their son or daughter liked the EBCE program better or much better than past school experiences and 95% indicated that they would allow their child to participate in EBCE if they had this choice to make again. Parents felt the greatest strengths of the EBCE program were:

1. Helped in choosing a career (36%).
2. Provided practical experiences in the world of work (17%).
3. Provided job experience (9%).
4. Helped develop confidence and independence (9%).

Only two of the parents did not indicate that the program had any weaknesses. Those parents who did note any weakness stated that the program:

1. Needed more academic courses.

2. Needed to permit more time on site.

3. Should have second-year students.

Over eighty percent (82%) of the respondents thought that the EBCE program had had a good impact on helping their children to formulate career plans. Eighty-six percent of the parents thought that their sons and daughters were more motivated to learn in the EBCE program than they were in traditional schools. Parents also mentioned that they had noticed positive changes in their sons or daughters that might be attributable to participation in the EBCE program. Of the twenty-two positive responses, fifteen related to changes in attitude, responsibility, maturation, and motivation; four related to career development, decision-making, and clarification; and three related to academics -- better grades, writing, spelling, and increased academic interest.

Only three responses related to any negative changes in the children that might have resulted from participation in the EBCE program. These responses included: 1) they lose interest, 2) he/she doesn't talk as much about school work, and 3) he/she is a little too independent.

Eighty-two percent of the parents believed that their son or daughter talked with them "daily" about "what's going in the career education program;" fifty-nine percent stated that they had never had contact with EBCE staff members. Forty-five percent of the respondents had never attended a meeting during the school year where other parents of EBCE students were present. However, 77% of the parents indicated that they had received enough information about their children's progress in the EBCE program.

Over 86% of the parents rated the general quality of the EBCE program staff as very good or excellent. Fifty-five percent rated their overall relationship with members of the EBCE staff as very good or excellent. The enthusiasm of the EBCE staff was rated as very good or excellent by 83% of the parents.

The majority of the parents (59%) indicated confidence in the occupational plans of their sons or daughters, where such plans existed; and five parents stated that their son or daughter had made no firm occupational plans at the time of the survey. Over 54% believed that their son or daughter would be attending college or business/trade school one year after graduating from high school; 36% thought their child would be working at that time.

Parents were also asked about where they had first heard about EBCE. Sources of initial information about EBCE most frequently mentioned by parents were their own children (68%) and the home high school (18%).

When parents were asked which kinds of students they thought would benefit most from a career education program, there seemed to be little consensus of opinion among the parents who responded to the item. Responses included students who were low achievers, energetic, non-college bound, not sure of career plans, shy, average, or not showing much interest in traditional school.

Based on the data obtained from parents on the Parent Opinion Survey, hypothesis 7 was not rejected. The majority of parents who responded to the questionnaire did exhibit positive attitudes toward the EBCE program.

Employer Data

One of the major groups necessary for operation of an EBCE program is the personnel at the experience sites. They serve as the instructors in the community sites and provide input to students and serve as resources for experiential learning activities.

Hypothesis 8

The eighth hypothesis stated that community instructors, experience site resource persons, or contact persons (hereafter designated as "employers") at various levels of their organization would have positive attitudes toward the EBCE program. The data used to test this hypothesis were gathered from the Employer Questionnaire which was mailed to employers by AEL in May, 1978. Seventy-seven individuals were randomly selected to be surveyed from a list of over 100 available experience site personnel for the FY'78 school year. The employers at the experience sites received the questionnaire in the mail during the first week of May. Even though employers were requested to return them by May 15, questionnaires which were received before June 30 were included in the tabulation. Thirty-four experience site personnel returned completed questionnaires to AEL/EBCE.

Results

Most employers were positive toward the EBCE program. They complimented EBCE strengths and offered suggestions for program improvement. Over three-fourths (76%) of the employers believed that their organization would continue to participate in the EBCE program in coming years, but only 15%

were unsure or didn't know of their organization's plans to continue participation in the EBCE program; two of the employers reported a definite no. Over 58% of the employers rated the program from moderately effective to very effective; only 9 percent rated it questionable or ineffective; many employers did not respond to the item.

More than 82% of the employers felt that the EBCE staff had provided them with the necessary information to direct students' activities, and that the EBCE program functioned as they had been initially led to believe was indicated by 79%.

Seventy-nine percent (79%) of the employers believed that the EBCE students who had been placed with them were interested in their organization. Over 61% of the employers reported that the EBCE staff always informed them of the specific reasons for making particular placements. Employers indicated that students placed at their sites frequently spent time in actively performing site activities (68%), talking with other experience site personnel (56%), observing site activities (76%), and talking directly to the community instructor (59%).

Experience site personnel often rendered various supportive services to EBCE students. The following services were frequently or occasionally rendered to students by employers:

1. Talked about activities at the job site (97%);
2. Talked about job opportunities (100%);
3. Evaluated individual student assignments (88%);
4. Helped plan students' assignments (68%); and
5. Supervised students performing job-related tasks (91%).

Employers seldom or never assisted students in non-job related assignments (68%), tutored in an academic area (56%), nor talked about students' personal problems (50%).

Of those who responded 70% believed that the greatest strengths of the EBCE program were in the areas of career planning and opportunities for experience. They felt EBCE was an important means of exposing students to the world of work, enabling them to explore different careers and aiding them in developing responsibility and interviewing skills.

Most employers reported favorable reactions toward EBCE students from employees and top-level management. Eighty-nine percent of employers' comments mentioned favorable reactions toward EBCE students from employees, and ninety-six percent of employers' comments mentioned favorable reactions toward EBCE students from top-level management.

Many employers who responded believed that the EBCE students' presence at their experience site had no impact on either the amount of work performed (45%) or the quality of work performed (48%) by regular employees. No impact on company training practices was noted by sixty-three percent of the employers, and fifty-two percent thought that there was no effect on company hiring practices. Where an impact was reported, it was almost always positive (ranging from 79% to 100%); however, most respondents perceived no impact whatsoever on company policies, practices, or production.

Many employers suggested that specific changes be made in FY'79 to ameliorate certain perceived program weaknesses; however, there seemed to be no consensus of opinion as to any outstanding program weakness. Several suggested that continuous hours and increased hours of participation were

needed, some were concerned about lack of interest in the community, and several were concerned about transportation, cost, and specialized counseling and placement.

Based on the data obtained from employer questionnaires, hypothesis 8 was not rejected. The majority of experience site resource personnel at various levels of theirorganizations did exhibit positive attitudes toward the EBCE program.

EBCE Staff Data

The EBCE staff (2 learning managers, 1 employer relations specialist, 1 counselor, and 1 project director) rated various learning strategies in the EBCE program. Data are presented in Table 9.

Table 9

All five staff members rated nine of the learning strategies as being highly important (4 or 5) and rated five as highly effective (4 or 5). The five rated highly effective were five of the nine learning strategies that were also rated highly important (a, e, g, i, and p).

The EBCE staff also rated 23 different areas of program impact -- impact upon students. Data are presented in Table 10.

Table 10

All five staff rated seventeen EBCE experience areas as having been either helpful or very helpful to students who participated in the program.

Table 9

EBCE Staff Ratings of Learning Strategies

(Frequencies)

Learning Strategies	How Important					How Effective					
	Not Important 1	2	3	4	Highly Important 5	Not Effective 1	2	3	4	Highly Effective 5	NA
a. Student Orientation	-	-	-	-	5	-	-	-	2	3	-
b. Student Accountability System	-	-	-	-	5	-	-	2	3	-	-
c. Student Negotiation	-	-	-	-	5	-	1	-	3	1	-
d. Preprepared Projects	-	-	1	-	4	-	-	1	2	2	-
e. Negotiated Projects	-	-	-	-	5	-	-	-	1	4	-
f. Journals	-	-	2	-	3	-	1	1	1	2	-
g. Competencies	-	-	-	-	5	-	-	-	2	3	-
h. Exploration Packages	-	-	-	-	5	-	-	1	1	3	-
i. Learning Level Activities	-	-	-	-	5	-	-	-	2	3	-
j. Special Placements	-	-	1	1	3	-	1	-	1	3	-
k. Employer Seminars	-	-	-	-	4	-	-	2	-	2	1
l. Student Retreat	-	-	-	1	1	-	-	-	1	1	3
m. Specialization Activities	-	-	-	1	4	-	1	-	2	2	-
n. Individualized Math Activities	-	-	-	-	1	-	-	-	1	-	4
o. Individualized English Act.	-	-	-	-	1	-	-	1	-	-	4
p. Group Activities	-	-	-	-	5	-	-	-	2	3	-

Table 10

EBCE Staff Ratings of Program Impact

(Frequencies)

How helpful have EBCE experiences been in helping students . . .	Very Helpful 5	4	3	2	Little or no help 1
a. Understand the role of science in our society today	-	3	2	-	-
b. Solve problems logically	-	5	-	-	-
c. Get along with others	5	-	-	-	-
d. Understand more about themselves	4	1	-	-	-
e. Develop their own creativity	-	4	1	-	-
f. Understand the democratic process	3	1	1	-	-
g. Learn how society's values, the government and the economy affect the world of work	3	2	-	-	-
h. Learn how their abilities and interests fit into potential careers	5	-	-	-	-
i. Learn how to find and keep a job	4	1	-	-	-
j. Learn to analyze potential jobs	2	3	-	-	-
k. Improve reading skills	-	3	2	-	-
l. Learn necessary basic skills for jobs of interest	1	4	-	-	-
m. Improve oral communication skills	5	-	-	-	-
n. Improve mathematics skills	-	2	3	-	-
o. Know level of basic skills proficiency required in jobs of interest	2	3	-	-	-

Table 10 (Cont'd)

EBCE Staff Ratings of Program Impact

(Frequencies)

How helpful have EBCE experiences been in helping students . . .	Very Helpful 5	4	3	2	Little or no help 1
p. Improve written communications skills	3	2	-	-	-
q. Become acquainted with resources useful in gaining information for work and decision making	3	2	-	-	-
r. Gain confidence in applying basic skills to complete tasks and solve problems	2	2	1	-	-
s. Take responsibility for their own actions	3	2	-	-	-
t. Communicate with adults	5	-	-	-	-
u. Use direct experience information in making decisions	3	2	-	-	-
v. Become more open to values and ideas different from their own	3	2	-	-	-
w. Feel prepared to accept adult responsibility	2	3	-	-	-

Similarly, all five staff perceived the improvement of mathematics skills as the area least impacted by EBCE program experiences.

The staff noted that factors such as: 1) the cooperativeness and support of the employers and community; 2) the expertise, leadership, enthusiasm, and positive attitude of EBCE personnel; and 3) interaction of students with adults in the working world have contributed in a major way to the success of EBCE. One staff member felt that the limited range of different occupations available in the community and the mandatory lunch period were obstacles that had limited the success of the EBCE program.

They perceived their students' greatest growths to have occurred in the areas of career awareness, self confidence, communication skills, responsibility and maturity, and the ability to get along with others. They felt their students benefitted the least from EBCE in basic math and science skills, and in terms of accountability (absent from school frequently).

Their beliefs with respect to the effects of the EBCE program on the traditional high school program are that there is now improved teacher and administrator understanding and attitude. In addition, some staff felt that the community has become more aware of the schools and the activities, and has generated in the employers a realization of the potential possessed by the students.

Staff indicated that very few changes (mostly minor) would be made in the program next year. These changes are related to the Exploration Guide, interest surveys, and value surveys.

Process Data

While some areas of evaluation were oriented towards the collection, processing, and analysis of rather objective and quantifiable data, other

areas were associated primarily with the analysis and synthesis of more subjective and qualitative data. This section deals with those data and insights gathered through observation of the implementation process and procedures utilized in the Conecuh County EBCE program and through interacting with EBCE staff and students.

In general, this project has been on schedule and was going well. Positive aspects of the project included the general quality of the staff, cooperation by the community employers, and enthusiasm of EBCE staff, students, parents, employers, and school personnel.

The privacy for each individual staff member has been greatly enhanced by renovation predominately supplied by local funds. Due to the addition of private offices, a private conference room, and individual counseling offices, program objectives are being met more adequately. This support from the local district in providing these facilities has made a positive impact on students and staff.

The employment of an EBCE Director with full responsibility for management and operation of the project and the addition of the second learning manager have made possible the fulfillment of the initial objectives and the initiation of subsequent goals and objectives. (As this document was being finalized, the Director resigned his position to accept another administrative position. The authors believe that the remaining staff will have no problems fulfilling the objectives which are part of the third-year scope of work.)

Classroom teachers must develop a greater awareness and understanding of the methods and purposes of EBCE through increased involvement and par-

ticipation with the project and staff members if institutionalization is to occur. Therefore the staff should develop plans and subsequently implement them to insure program awareness and understanding among the regular Conecuh County classroom teachers.

The recruitment and analysis of community sites and the scheduling and placement of students has been a big factor in developing the community at this time. Students have been prepared for their exploratory experience, but the development of additional documentation of community sites and the learning potential of the sites is needed.

The counselor's deep understanding and rapport with the students has permitted EBCE participants to feel free to go to the counselor with problems and concerns. While personal traits and characteristics are related to work situations in individual counseling sessions, the relationship of group counseling topics and job requirements to the community are not presented. There needs to be more direct relationship given to the existing situations of the county during group counseling sessions.

Analysis of student needs by learning managers was quite apparent by examination of the individual learning projects. Student rapport with the LMs seems to be very positive. For successful implementation of the program, the learning managers could benefit from direct exposure to community sites by securing additional input for use in the preparation of more specific community related activities.

Non-traditional roles have been explored through group counseling, individual counseling and the use of non-traditional placements on job sites.

Excellent records are being kept which document the placement of students in non-traditional work roles. Students themselves document evidence of stereotyping on each exploration and learning level site. Students who desire exploration in non-traditional career roles and roles unavailable in Evergreen should possibly be provided with the opportunity to observe these roles on sites elsewhere.

SUMMARY AND CONCLUSIONS

An alternative educational program titled Experience-Based Career Education (EBCE) was designed, developed, and tested by the Northwest Regional Educational Laboratory (NWREL), using both U. S. Office of Education (USOE) and National Institute of Education (NIE) monies. The purpose of the program was to provide an alternative educational experience for a cross-section of high school age youths. This alternative educational experience was to be characterized by an emphasis on direct employer-site experiences personalized to each student in terms of individual needs, interests, and abilities. The program integrated academic requirements and work experiences opportunities into a comprehensive curriculum.

Based on national public concern and national government priorities, USOE monies were made available from Part D of the Vocational Education Act for educational agencies to operate and demonstrate the EBCE-type programs. Conecuh County, Evergreen, Alabama, applied for and received a federal grant to operate and demonstrate the NWREL model of EBCE. In order that the Conecuh County EBCE program be properly evaluated, an independent third-party evaluation team from the Appalachia Educational Laboratory (AEL) developed and implemented an evaluation and data analysis plan. A summary of the results obtained from implementation of the plan follows.

Student Data

Assessment instruments were administered to EBCE and comparison students on a pretest/posttest basis. Students completed subtests of the Comprehensive

Tests of Basic Skills (Reading Comprehension, Mathematics Concepts, and Mathematics Applications), the JOBS instrument (sex-role stereotyping), the New Mexico Career Oriented Activities Checklist (career maturity), the Student Attitude Survey battery (Learning Environment, Work, Self, Others), the Nowicki-Strickland Scale (locus of control), and a Student Information Questionnaire (demographic data - pretest only).

Parents, employers, and EBCE staff were also asked to respond to an end-of-year questionnaire. Implementation process documentation involving observation and interaction with students and staff was completed throughout the implementation and operation of the program.

Basic Academic Skills. Analysis of student outcome data indicated positive results favoring the EBCE program. Analysis of scores on standardized basic skills tests (CTBS) indicated that EBCE students did as well as comparison students. Both groups had equivalent scores at the beginning of the program operation and also at posttest time in the Spring. Hence it can be concluded that EBCE students acquired facilitation in basic skills to the same degree as comparison students enrolled in the traditional high school.

Career Knowledge and Planning. Analysis of scores on Part 2 of the SAS battery indicated that EBCE students did acquire significantly greater mastery in career knowledge ($p < .001$) and career planning ($p < .05$) and exhibited significantly more positive attitudes toward work ($p < .01$). During one year of program operation, the EBCE students did acquire significantly more positive scores in these three areas than did the comparison students.

Career Maturity. The EBCE students did acquire significantly greater career maturity as measured by the NMCOAC. Although comparison students showed a slight growth, the growth displayed by EBCE students was greater -- significant at the .05 level.

Attitudes: Education. EBCE students displayed significantly more positive attitudes toward various aspects of education and toward the total learning environment than did comparison students as measured by Part 1 of the SAS. Inspection of the data showed that: 1) comparison students had initial scores equivalent to the EBCE students on two of the five subscores, 2) EBCE students showed positive growth on all five subscores, 3) comparison students showed negative growth on three subscores, and 4) EBCE students scored significantly higher on the posttests on all five subscores (even after statistical adjustment for pretest differences; see Figure 4).

Sex-role stereotyping. Although EBCE students were initially sex-role stereotyping similarly to comparison students, EBCE students were male-typing and sex-typing significantly less ($p < .05$ and $p < .01$ respectively) by the end of the year. While persons working in non-traditional roles in Conecuh County are almost non-existent, the impact of sex-fair counseling, sex-role awareness activities, and sex-fair materials is somewhat evidenced in the data. Further, the data indicate that Conecuh County students are not, as a whole, engaged to any great degree in sex-stereotyping.

Locus of Control. EBCE students did decrease their feelings of externally oriented locus of control at a similar rate as the comparison

students. However, EBCE students were both more externally oriented initially (and finally) than comparison students. It should be noted, however, that as a group the Conecuh County students do appear to be predominately internally controlled.

Self and Others. Additional hypotheses about attitudes toward self and toward others were also tested. Analysis of data indicated that EBCE students did develop at a greater rate more positive attitudes toward self than did the comparison students. A similar trend for EBCE students was apparent in their attitudes toward others. Again, both groups of students appear to have positive attitudes toward themselves and others -- thereby decreasing the chances for any significant positive change.

Parent Data

A questionnaire was mailed to parents of the 42 EBCE students to assess their attitudes about the EBCE program. Only 22 parents (52%) responded to the questionnaire. Most parents who responded were very positive towards all aspects of the program. Eighty-six percent of the parents thought that their sons and/or daughters were much more motivated to learn in the EBCE program than they were in traditional schools. Over 90% of the respondents thought that their son or daughter liked the EBCE program much better than past school experiences. Furthermore, 95% indicated that they would allow their child to participate in EBCE if they had the choice to make again; only 54% believed that their child would be attending some form of post-secondary educational institution.

Employer Data

A questionnaire was mailed to 77 employer instructors at experience sites. Thirty-four (34) employers responded to the questionnaire. Most employers who responded were positive towards the program. They complimented the EBCE program strengths and offered suggestions for program improvement. Of those who responded to the items over 76% believed that their organization would continue to participate in coming years and over 58% rated the program from moderately effective to very effective. Over three-fourths of the employers believed that the greatest strengths of the EBCE program were in the areas of career planning and opportunities for experience; the greatest weakness related to shortness of time on site and lack of continuous hours. Many of the employers also believed that the presence of EBCE students at their experience sites had had no impact on either the quantity or quality of work performed by the regular employees.

EBCE Staff Data

The five EBCE staff members rated nine of the learning strategies utilized in the EBCE model as highly important and also indicated that five of the strategies had been highly effective in producing student learning. Mathematics skills was the area least impacted by EBCE program experiences. They contended that the program had been quite helpful in teaching students behaviors such as learning how their abilities/interests related to careers, learning how to get along with others, improving their oral communication skills, and communicating with adults.

EBCE staff felt that the cooperation and support of the employers and community personnel; their own expertise, leadership, and enthusiasm; and

interaction of students with adults in the working world were the three major components contributing to the success of EBCE. They also felt, however, that the limited range of different occupations and the requirement for students to return to the learning center for lunch were obstacles that had limited the success of EBCE.

They also indicated that only minor changes for program improvement would occur during the next year. Some of the comments related to making changes in the Exploration Guide, interest surveys, and value surveys.

Process Data

Observation of the implementation process was made periodically by the third-party evaluators with formative input being given on an immediate as-needed basis. Through observation and interaction much subjective and qualitative data were gathered.

The project appeared to be on schedule in terms of control, planning, and management. The general quality of the staff, cooperation by community personnel, and enthusiasm by all concerned helped to get over the hurdles. Employment of a full-time Project Director also made possible the fulfillment of initial objectives and the initiation of subsequent goals and objectives. Renovation of physical facilities also had a positive impact on program operations.

There were some perceived weaknesses or problem areas which reduced the potential for a totally successful implementation. These weaknesses or problem areas included:

1. Lack of an adequate plan to insure institutionalization,
2. Need for additional documentation of community sites and the learning potential of the sites, and

3. Lack of direct contact/exposure with sites by Learning Managers, for purposes of securing additional input for use in preparing more specific community-related activities.

The strengths of the program which have contributed to its current status include:

1. Quality and enthusiasm of the operations staff and management staff,
2. Cooperation of the community, and
3. Adequate physical facilities.

While these have all contributed to the project's present status, enthusiasm of the staff, cooperation from the community, and administrative support must not be reduced or diminished.

Since the program has now been in operation for 1½ years with students and while the major emphasis was on start-up and operation, increased emphasis during year three must be placed on institutionalization and dissemination. Involvement with LEAs through "state strategy" efforts should enhance the visibility of the program and increase the potential for adoption by other LEAs.

In conclusion, it appears that the implementation process was progressing satisfactorily. The securing of a full-time Project Director helped to insure that all major milestone events were accomplished.

EBCE student accomplishments appeared to be substantial. Measured growth in basic skills was equivalent to that experienced by comparison students in traditional high schools. EBCE students' attitudes toward the various aspects of the learning environment, career knowledge, work, and career maturity were significantly more positive than comparison students. EBCE students showed significant gains in reducing their sex-role stereotyping but not in increasing their internal locus of control. However,

unobtrusive assessment indicated that EBCE students were displaying more maturity and accepting responsibility more readily. Not only were the measured outcomes of program impact on students substantial, the impact was visually obvious. It may well be that in Conecuh County, EBCE is truly an alternative to an educational boondoggle called the traditional school. It was obvious to the evaluators that the program was operated and managed in a very efficient and effective manner. It was also obvious to the evaluators that the students were being impacted in a very positive way. Since some of the student data do not directly support the program's impact (e.g., locus of control), one may be led to conclude that the program had no impact on certain characteristics. In the evaluator's opinion, this is not the case. The assessment instruments may have been too insensitive to measure the actual impact of the program.

Finally, the perceptions and attitudes of parents and employers as well as those of the EBCE staff were positively oriented. They complimented the strengths and successes and offered comments and suggestions to alleviate program weaknesses or problem areas.

It is the opinion of the authors that the EBCE program in Conecuh County, Alabama, has successfully provided students with an alternative educational opportunity which is relevant to their needs, interests, and abilities. It is felt that EBCE will be the catalyst for making the transition from student to a member of the world of work a smooth and rewarding journey.

APPENDIX A

Comprehensive Tests of Basic Skills

Comprehensive Tests of Basic Skills (CTBS)

Purpose

The CTBS were designed to provide improved measurement of the extent to which individual students have developed basic academic skills. There are four levels of the tests with alternate forms for each level.

Respondent Group

Students

Item Content

The CTBS battery booklet (Level 4 - Form S) includes tests in several basic skills areas: reading, language, arithmetic, study skills, science and social studies. The areas are divided into 10 separately-timed tests, each utilizing a multiple-choice item format. The 10 tests of the CTBS and a brief description are as follows:

Test 1 - Reading Vocabulary. This 40-item test provides a measurement of a student's ability to select the word that has the best meaning.

Test 2 - Reading Comprehension. This 45-item test is composed of blocks of items which test the reading of such selections as articles, stories, poems, and letters.

Test 3 - Spelling. This 30-item test measures the student's ability to recognize correct and incorrect spelling of words.

Test 4 - Language Mechanics. This 20-item test measures a student's ability to punctuate and capitalize.

Test 5 - Language Expression. This 35-item test measures the correctness and effectiveness of expression.

Test 6 - Mathematics Computation. This test consists of 48 items equally distributed among the four arithmetic operations: addition, subtraction, multiplication, and division.

Test 7 - Mathematics Concepts and Applications. The first 25-item test measures the student's ability to recognize and/or apply the appropriate concept and technique; the ability to convert concepts from one form to another; the ability to comprehend numerical concepts and understand their interrelationships; and the ability to organize all facts in more complex problems. The second 25-item test measures a student's problem-solving abilities. Separate scores are reported for each section.

Test 8 - Reference Skills. This 20-item test measures the ability to use reference materials - to locate various types of information and select the appropriate reference books for specific purposes.

Test 9 - Science. This 40-item test assesses the student's ability to investigate problems in science and recall scientific facts or concepts.

Test 10 - Social Studies. This 39-item test measures the student's grasp of concepts, generalizations, and inquiry

skills necessary for effective problem solving in social studies.

Administration Procedures

The CTBS-Level 4 may be completed by any student in grades 8 through 12. The CTBS total battery requires approximately 4½ hours (each test has a working time and time allotted for instructions). The instrument can be administered on an individual as well as a group basis. The complete CTBS battery or any subset of the 10 tests may be administered.

Scoring Procedures

The publisher furnishes a scoring key for hand-scoring or the answer sheets may be sent to the publisher for machine scoring. Percentile conversion tables are available in the manual.

Availability/Price*

Complete Battery	
Booklets	22.40/35
Partial Battery	
Booklets	21.70/35
Answer Sheets (IBM - hand score)	
Reading & Reference Skills	5.00/50
Mathematics	5.00/50

*as of 1-1-77

Hand-Scoring Stencils

Reading & Reference Skills	2.50/1
Mathematics	2.50/1

Order from:

CTB/McGraw-Hill
Order Service Center
Del Monte Research Park
Monterey, CA 93940

Phone: 408/649-8400

APPENDIX B

Student Attitude Survey

Student Attitude Survey (SAS)

Purpose

The SAS was designed to provide an instrument for the assessment of student attitudes toward learning environments, career knowledge and planning, self, and others.

Respondent Group

Students

Item Content

There are four parts to the survey. The first 26 items yield four subscale scores and a total composite score on attitudes toward learning environments.

Subscale 1. This subscale consists of 7 items which measure student attitudes toward education in general.

Subscale 2. This subscale consists of 5 items which measure student attitudes toward school curriculum.

Subscale 3. This subscale consists of 9 items which measure student attitudes toward school resources.

Subscale 4. This subscale consists of 5 items which measure student attitudes toward school counseling.

Composite Score. The totality of 26 items measure overall student attitudes toward the learning environment.

The next 22 items yield two subscale scores on career knowledge and career planning. There are 12 items in the

career knowledge subscale and 10 items in the career planning subscale.

The third subtest contains 19 items. This subtest assesses students' attitudes toward themselves. The fourth subtest contains 13 items. This subtest measures students' attitudes toward other people.

Administration Procedures

The SAS may be completed by any secondary school student. The SAS takes approximately 25 minutes to administer. Since the item order is randomized within the first 26 items, the subscales cannot be administered separately.

Scoring Procedures

Since many of the items utilize reverse-polarity, hand scoring keys are not available. Machine scoring and profile description sheets may be obtained from the publisher.

Availability/Prices*

Complete Battery	12.50/50
Part 1 only	8.50/50
Scoring	
SAS	.30/student
Part 1	.15/student

*Prices as of 1-1-77

Order from:

Materials Distribution Center
Research for Better Schools
Suite 1700
1700 Market Street
Philadelphia, PA 19103

APPENDIX C

New Mexico Career Oriented Activities Checklist

New Mexico Career Oriented Activities Checklist (NMCOAC)

Purpose

The NMCOAC was designed to assess the steps that students have taken in their high school education in order to help make an occupational decision.

Respondent Group

Students (Grade levels: 9, 10, 11, 12)

Item Content

The NMCOAC contains 25 items which deal with four sub-objectives: consulted various sources of information about occupations (11 items), engaged in activities that would provide information about occupations the student is considering (6 items), obtained the high school training needed for the occupations being considered (3 items), and made definite plans regarding what will be done upon graduation (5 items).

Administration Procedures

The NMCOAC may be completed by any student in grades 9 through 12. It is a timed test with a 20-minute time limit. Answers are marked on separate answer sheets.

Scoring Procedures

The NMCOAC has two scoring stencils, one for responses earning one (1) point, and one for responses earning two (2)

points. The number of marks showing through the 1-point stencil are tallied. The number of marks showing through the 2-point stencil are multiplied by 2. The two scores are then added together to yield the total score. (Percentile and stanine norms for the ninth and twelfth grades are presented in the manual.)

Availability/Price*

Booklets:	$8.50/35	$22.50/100
Answer Sheets:	2.00/35	4.50/100

Scoring Stencils (2 stencils): $1.50

Manual: $2.50

Order from:

MONITOR

P. O. Box 2337

Hollywood, CA 90028

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*Price as of 1-1-77

APPENDIX D

JOBS

JOBS

Purpose

The JOBS instrument was designed to provide an assessment of degree of sex-role stereotyping demonstrated by individuals. This AEL-developed instrument is based on activities in the AEL/EBCE Student Career Guide. It is an experimental instrument.

Respondent Groups

Students and other adults.

Item Content

The instrument contains a list of 30 occupations. Students mark the occupations in terms of whether the job can best be performed by a man (M) or a woman (W), or performed equally well by either sex (B).

Administration Procedures

The JOBS instrument may be completed by secondary or post-secondary students, or other adults. The instrument requires about 15 minutes to complete.

Scoring Procedures

Three scores are obtained: frequencies of M, W and B responses. These three scores can be utilized to assess degree of change in stereotyping.

Availability/Price

The local implementation site is permitted to duplicate/revise this instrument at their own expense.

AEL:JES:8/77

Name _____ Date _____

School _____ City _____ State _____

JOBS

INSTRUCTIONS: Below is a list of jobs. Use the following code to mark each item:

M - this job can best be performed by a man.

W - this job can best be performed by a woman.

B - this job can be performed equally by either a man or woman.

_____	nurse	_____	plumber
_____	mechanic	_____	beautician
_____	surgeon	_____	scientist
_____	lawyer	_____	telephone operator
_____	electrician	_____	clothes designer
_____	machinist	_____	accountant
_____	secretary	_____	dispatcher
_____	babysitter	_____	cashier
_____	veterinarian	_____	counselor
_____	pilot	_____	truck driver
_____	shop teacher	_____	engineer
_____	farmer	_____	detective
_____	stock broker	_____	mortician
_____	creative writer	_____	receptionist
_____	dental hygienist	_____	insurance agent

APPENDIX E

Nowicki-Strickland Scale

Nowicki-Strickland Scale (ANS-IE)

Purpose

The ANS-IE was designed to assess the extent to which an individual's locus of control is internalized or externalized.

Respondent Group

Students and other adults.

Item Content

The adult form contains 40 items with a Yes-No response mode.

Administration Procedures

The ANS-IE may be completed by students and other adults by circling their response (Yes or No) for each of the 40 items. The instrument requires about 20 minutes to complete.

Scoring Procedures

A single score is obtained by counting the frequency of externally-endorsed responses.

Availability/Price

Information on availability/prices/scoring keys may be obtained from the Evaluation Handbook author:

Dr. Joe E. Shively
Experiential Education Division
Appalachia Educational Laboratory
P. O. Box 1348
Charleston, WV 25325

APPENDIX F

Student Information Questionnaire

Student Information Questionnaire (SIQ)

Purpose

The SIQ was designed to obtain data on basic demographic variables.

Respondent Group

Students (EBCE and comparison/control).

Item Content

The 11-item questionnaire provides information on race, sex, grade level, age, parents' educational levels and occupations, and long and short-range goals.

Administrative Procedures

The SIQ is usually the first instrument that is administered in the pretest battery. It is untimed but is usually completed by students in 5-10 minutes.

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and tabulations are used. For those items requiring an open response, tabulations are used.

Availability/Price

The local implementation site is permitted to duplicate this instrument at their own expense.

AEL/EBCE/JES/11/77

NAME _____ DATE _____

SCHOOL _____ CITY _____ STATE _____

EBCE STUDENT: ☐ YES ☐ NO

STUDENT INFORMATION QUESTIONNAIRE

1. Are you:

   ☐ Male

   ☐ Female

2. Are you:

   ☐ White

   ☐ Black

   ☐ Oriental

   ☐ Spanish Descent (Chicano, Puerto Rican, etc.)

   ☐ Native American

   ☐ Other (specify) _____

3. What is your current grade level?

   ☐ 10th grade

   ☐ 11th grade

   ☐ 12th grade

4. What is your birth date?

   _____ _____ _____
   MONTH DAY YEAR

5. What is your father's highest level of formal education completed?

- ☐ None
- ☐ Elementary School
- ☐ Some High School
- ☐ High School Graduate
- ☐ Some post-secondary (for example, some college, junior college, business school, trade or technical school)
- ☐ College graduate (four-year degree)
- ☐ Some graduate work
- ☐ Advanced degree (specify) _____

6. What is your mother's highest level of formal educat.. completed?

- ☐ None
- ☐ Elementary School
- ☐ Some High School
- ☐ High School Graduate
- ☐ Some post-secondary (for example, some college, junior college, business school, trade or technical school)
- ☐ College graduate (four-year degree)
- ☐ Some graduate work
- ☐ Advanced degree (specify) _____

7. How many of your brothers and sisters dropped out of school?

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five or More

8. What are your long-range goals? Check only one.

- ☐ 1. CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent
- ☐ 2. CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plbmber, telephone installer, carpenter
- ☐ 3. FARMER, FARM MANAGER
- ☐ 4. HOMEMAKER OR HOUSEWIFE
- ☐ 5. LABORER such as construction worker, car washer, sanitary worker, farm laborer
- ☐ 6. MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official
- ☐ 7. MILITARY such as career officer, enlisted man or woman in the armed forces
- ☐ 8. OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus, or truck driver; gas station attendant
- ☐ 9. PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress
- ☐ 10. PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner
- ☐ 11. PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman
- ☐ 12. SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker
- ☐ 13. SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter
- ☐ 14. TECHNICAL such as draftsman, medical or dental technician, computer programmer
- ☐ 15. OTHER (specify) _____
- ☐ 16. DON'T KNOW

9. What do you expect to be doing one year after completing high school?

- ☐ Working full-time
- ☐ Entering an apprenticeship or on-the-job training program
- ☐ Going into regular military services or to a service academy
- ☐ Being a full-time homemaker
- ☐ Attending a vocational, technical, trade or business school
- ☐ Taking academic courses at junior or community college
- ☐ Taking technical or vocational subjects at a junior or community college
- ☐ Attending a four-year college or university
- ☐ Working part-time
- ☐ Other (travel, take a break, no plans)

10. What is your major field of study?

- ☐ General Curriculum
- ☐ Vocational Education Curriculum
- ☐ College Preparatory Curriculum
- ☐ Other (specify) _____

11. Under FATHER, circle the one number that best describes the work done by your father (or male guardian). Under MOTHER, circle the one number that best describes the work done by your mother (or female guardian). The exact job may not be listed, but circle the one that comes closest. If either of your parents is out of work, disabled, retired, or deceased, mark the kind of work that he or she used to do.

(Circle one number in each column.)

	FATHER	MOTHER
CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent. . .	01	01
CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter	02	02
FARMER, FARM MANAGER	03	03
HOMEMAKER OR HOUSEWIFE	04	04
LABORER such as construction worker, car washer, sanitary worker, farm laborer	05	05
MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official	06	06
MILITARY such as career officer, enlisted man or woman in the armed forces	07	07
OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus, or truck driver; gas station attendant	08	08
PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress	09	09
PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner	10	10
PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman	11	11
SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker	12	12
SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter	13	13
TECHNICAL such as draftsman, medical or dental technician, computer programmer	14	14

APPENDIX G

Parent Opinion Survey

Parent Opinion Survey (POS)

Purpose

The POS was designed to provide an assessment of parents' opinions about the EBCE program in which their son or daughter is participating.

Respondent Group

Parents (guardians) of EBCE students.

Item Content

The 24-item inventory identifies parent attitudes toward the EBCE program and permits parents to compare the EBCE program to the traditional high school program in which their children were previously participating.

Administration Procedures

The POS is designed to be completed by the parents in the privacy of their homes. Parents are mailed the POS, a cover letter explaining the purpose of the instrument, and a stamped return envelope. They are requested to return the completed POS by a specified date. (A telephone call may be necessary to increase the return rate.)

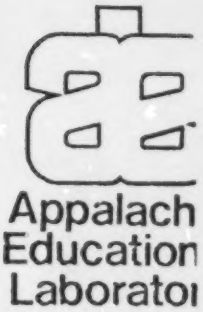
Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics

and tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate this instrument at their own expense.



May 1, 1978

Dear Parents:

During the past year your child has participated in an Experience-Based Career Education (EBCE) program, called ACTIO-N. Appalachia Educational Laboratory has a contract to do an independent evaluation of the federally-funded EBCE program. It is extremely important that we receive some information from you concerning your thoughts and attitudes toward the EBCE program. Your responses are therefore an important part of a national attempt to evaluate the EBCE project.

I will be responsible for analysis of the information obtained on the questionnaire. Your responses will be carefully coded so that confidentiality will be preserved. None of the teachers or administrators of the EBCE program will see your questionnaire. They will see a summarization of all the questionnaires in a Final Evaluation Report.

If you have any questions or concerns about any of the items, please feel free to call me toll free at 800/624-9120. Please return the questionnaire in the enclosed envelope by May 15.

Thank you again for taking your valuable time to assist us in evaluating and improving the EBCE program.

Sincerely,

Joe E. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:cd

Enclosure

Appalachia Educational Laboratory, Inc. • Experiential Education Division
20th and MacCorkle Avenue, SE • Charleston, West Virginia 25304
(304) 344-8371

Parent Opinion Survey

This survey is meant to give you an opportunity to express your opinions about the Experience-Based Career Education Program your son or daughter has been participating in. Most of the questions are to be answered on a scale of numbers from (1) to (5) The phrases at the top and bottom of each set of questions indicate what the scale means. A (1) may mean something like "Definitely No"; if you feel strongly that the answer to the question is No, then you should circle the (1). A (5) may mean "Definitely Yes"; if you feel strongly that the answer is Yes, then you should circle the (5). The numbers in between (2, 3, 4) indicate an opinion somewhere in between "Definitely No" and "Definitely Yes". Some scales have different phrases, but they all work the same way.

Read the phrase above the numbers so you know what the scale means, then read each question, and circle the number which is closest to your opinion. There are no right or wrong answers; your thoughts and feelings are the important things in this survey. The answers parents give will help determine how well the program is doing now and improve it in the future. Remember to circle a number for each item. Thank you for taking the time to fill out this survey.

PARENT OPINION SURVEY

1. How well does the EBCE Program compare overall with the past school experiences of your daughter or son?

Much Worse				Much Better
1	2	3	4	5

2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?

Much Worse				Much Better
1	2	3	4	5

4. What do you think are the greatest weaknesses of the EBCE Program?

_____

_____

_____

_____

5. What do you think are the greatest strengths of the EBCE Program?

_____

_____

_____

_____

6. Have you received enough information about your son's or daughter's progress in the EBCE Program?

Definitely NO				Definitely YES
1	2	3	4	5

7. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?

Much Less				Much More
1	2	3	4	5

8. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?

Definitely Bad				Definitely Good
1	2	3	4	5

9. In comparison with regular schools, how much opportunity did the EBCE Program provide your daughter or son for general learning?

Much Less		About the Same		Much More
1	2	3	4	5

10. In comparison with past experiences in regular schools, how motivated is your daughter or son to learn in the EBCE Program?

Much Less		About the Same		Much More
1	2	3	4	5

11. How would you rate the approaches to learning used in the EBCE Program?

Poor				Excellent
1	2	3	4	5

12. What positive changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

_____

_____

_____

13. What negative changes have you noticed in your son or daughter that might be a result of participation in the EBCE Program?

_____

_____

_____

14. How often does your son or daughter talk to you about what's going on in the EBCE Program?

Almost Never				Almost Daily
1	2	3	4	5

15. About how often have you had any contact with any EBCE Program staff members?

Almost Never				Very Frequently
1	2	3	4	5

16. How many meetings have you attended during this school year where other parents of EBCE students were present?

None	1	2	3	4 or More

17. How would you rate the general quality of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

18. How would you rate the business or community resources available in the EBCE Program?

Poor				Excellent
1	2	3	4	5

19. How would you rate your overall relationship with the staff of the EBCE Program?

Poor				Excellent
1	2	3	4	5

20. How would you rate the enthusiasm of the EBCE Program staff?

Poor				Excellent
1	2	3	4	5

21. What do you think of the occupational plans of your daughter or son?

a. ___ There aren't any firm plans yet.

b. ___ The plans should be changed.

c. ___ The plans seem to be good.

d. ___ We haven't really had a chance to discuss the plans.

22. What do you think your son or daughter will be doing a year after high school?

a. ___ Working

b. ___ Attending some kind of college

c. ___ Going to a business or trade school

d. ___ Military

e. ___ Other (please specify) _____

23. How did you first hear about the EBCE Program?

_____

24. What kinds of students do you think benefit most from the EBCE Program?

_____

_____

APPENDIX H

Employer Questionnaire

Employer Questionnaire (EQ)

Purpose

The EQ was designed to provide an assessment of community persons' opinions about the EBCE program to which they have devoted time and resources.

Respondent Group

Community Employers/Resource Persons

Item Content

The 15-item questionnaire identifies community employers/resource persons attitudes toward the EBCE program and elicits the degree of their support for continued participation.

Administrative Procedures

The EQ is designed to be completed by the community personnel in their places of business. Community employers/resource persons are mailed the EQ, a cover letter explaining the purpose of the instrument, and a stamped, self-addressed return envelope. They are requested to return the completed EQ by a specified date. (A telephone call may be necessary to increase the return rate.)

Scoring Procedures

Each item is scored and analyzed separately. For those items utilizing a scalar response, descriptive statistics and

tabulations are used. For those items requiring an open-ended response, tabulations are utilized.

Availability/Price

The local implementation site is permitted to duplicate the EQ at their own expense.

Appalachia Educational Laboratory

May 1, 1978

Dear Contact Person:

Your organization has been most helpful to the local Experience-Based Career Education (EBCE) Program, called ACTIO-N, by contributing time and resources, thus providing students with an opportunity to learn. Appalachia Educational Laboratory has a contract to do an independent third-party evaluation of the federally-funded EBCE program. It is extremely important that we find out what you who work with our students think about the EBCE program. A questionnaire was developed to help us to obtain some of this needed information. I would like you to give the enclosed questionnaires (and return envelopes) to the community instructors in your organization who have worked most closely with the students. If you fill the dual roles of organization contact person and community instructor, please feel free to complete one of the questionnaires.

I will be responsible for analysis of the data obtained on the questionnaire. I would like to assure you that the carefully coded information obtained from this questionnaire will remain confidential and will not be seen by anyone in the EBCE project. Printed reports of the data will contain only summary information and will not contain specific names of individuals or organizations.

If there are any questions about the procedures or any of the items on the questionnaire, please feel free to call me at 800/624-9120. I would appreciate it if the completed questionnaires were returned in the enclosed envelope by May 15.

Thank you for taking your valuable time to provide us with this most helpful information.

Sincerely yours,

Joe E. Shively

Joe E. Shively, Ph.D.
Director of Evaluation
Experiential Education Division

JES:cd

Enclosures

Appalachia Educational Laboratory, Inc. • Experiential Education Division
20th and MacCorkle Avenue, SE • Charleston, West Virginia 25304
(304) 344-8371

EMPLOYER QUESTIONNAIRE

Name of Resource Person _____

Name of Company _____

Questions

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

   Yes _____ No _____ Sometimes _____

2. Did the EBCE staff usually:

   _____ Show you the Student Activity Sheet(s)

   _____ Show you the Student Program Profile

   _____ Show you the type of products expected from student

   _____ Explain reason for the particular placement

   _____ Provide you with feedback on student's progress

3. Which of the following supportive services do you (or others at your site) provide for the Experience-Based Career Education (EBCE) program students? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never
Do you talk about job opportunities?	_____	_____	_____	_____
Do you talk about the students' personal problems?	_____	_____	_____	_____
Do you talk about activities at your site?	_____	_____	_____	_____
Do you tutor in an academic area?	_____	_____	_____	_____
Do you evaluate individual students' assignments?	_____	_____	_____	_____

	Frequently	Occasionally	Seldom	Never
Do you assist students in non-job related assignments?	_____	_____	_____	_____
Do you supervise students to perform a specific job-related task at your site?	_____	_____	_____	_____
Do you help plan student assignments?	_____	_____	_____	_____
Other (specify) _____				
_____	_____	_____	_____	_____

4. How do students spend their time at your site? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never
Observing site activities	_____	_____	_____	_____
Researching from site materials	_____	_____	_____	_____
Actively performing site activities	_____	_____	_____	_____
Talking with me	_____	_____	_____	_____
Talking with other site personnel	_____	_____	_____	_____
Individual study	_____	_____	_____	_____
Other (specify) _____				
_____	_____	_____	_____	_____

5. Do you think the EBCE students have been interested in your site?

Yes _____ No _____ Don't know _____

Explain: _____

_____

6. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?

   Yes _____ No _____ Don't know _____

7. How have employees at your site reacted to the EBCE students placed at your site? _____

   _____

8. How has top level management reacted to the EBCE students placed here? _____

   _____

9. Have you been satisfied with the feedback that you received relating to what happens to the student after he leaves your site?

   Yes _____ No _____ Comment: _____

   _____

10. Do you think your company will continue working with the EBCE project during the next couple of years?

    Yes _____ No _____ Don't know _____

11. Based on the students and staff you've met, how effective do you feel the program was? _____

    _____

12. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

    Yes _____ No _____ Don't know _____

13. What do you feel the strengths of the EBCE Program are?

    _____

    _____

14. What do you feel the weaknesses of the EBCE Program are?

_____

_____

15. To what extent has the EBCE Program had an impact on . . . . .?

(Check each appropriate category.)

	How Much Impact				Value of Impact		
	No Impact	Some Impact	Much Impact	Don't Know	Good Impact	Bad Impact	Don't Know
a. Quality of work performed by regular employees	___	___	___	___	___	___	___
b. Amount of work performed by regular employees	___	___	___	___	___	___	___
c. Company hiring practices	___	___	___	___	___	___	___
d. Company training practices	___	___	___	___	___	___	___
e. Other possible impacts (list)							
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___

APPENDIX I

EBCE Staff Questionnaire

EBCE STAFF QUESTIONNAIRE

This questionnaire is being utilized to obtain your perceptions and opinions about the implementation of EBCE at your site. Your responses will be coded so that confidentiality will be preserved. None of the other local staff or administrators of the EBCE program will see your completed questionnaire. They will see a summary report of all the questionnaires in the Final Third-Party Evaluation Report. Thank you for again taking your valuable time to assist in evaluating and improving the EBCE program.

Name _____

Site _____

Position _____

1. Listed below are major learning strategies used in one or more EBCE projects. Some strategies may be considered important but not producing effective results, while others may be considered very effective but of low importance. Please rate strategy in terms of how important you feel it is for EBCE students and then in terms of how effective you feel it has been this year. Using the 5-point scale, rate importance and effectiveness by circling the appropriate number on the scale for each learning Strategy. If the strategy is not used in your project, please circle NA for not applicable.

Learning Strategies	How Important (Not Imp. → Highly Imp.)					How Effective (Not Eff. → Highly Eff.)					
a. Student Orientation	1	2	3	4	5	1	2	3	4	5	NA
b. Student Accountability System	1	2	3	4	5	1	2	3	4	5	NA
c. Student Negotiation	1	2	3	4	5	1	2	3	4	5	NA
d. Preprepared Projects	1	2	3	4	5	1	2	3	4	5	NA
e. Negotiated Projects	1	2	3	4	5	1	2	3	4	5	NA
f. Journals	1	2	3	4	5	1	2	3	4	5	NA
g. Competencies	1	2	3	4	5	1	2	3	4	5	NA
h. Exploration Packages	1	2	3	4	5	1	2	3	4	5	NA
i. Learning Level Activities	1	2	3	4	5	1	2	3	4	5	NA
j. Special Placements	1	2	3	4	5	1	2	3	4	5	NA
k. Employer Seminars	1	2	3	4	5	1	2	3	4	5	NA
l. Student Retreat	1	2	3	4	5	1	2	3	4	5	NA
m. Specialization Activities	1	2	3	4	5	1	2	3	4	5	NA
n. Individualized Mathematics Activities	1	2	3	4	5	1	2	3	4	5	NA
o. Individualized English Activities	1	2	3	4	5	1	2	3	4	5	NA
p. Group Activities (e.g., counseling)	1	2	3	4	5	1	2	3	4	5	NA
q. Others (please specify):											

2. How helpful have EBCE experiences been in helping students understand the role of science in our society today?

Very helpful			Of little or no help	
5	4	3	2	1

3. How helpful do you feel EBCE experiences this year have been in helping students solve problems logically?

Very helpful				Of little or no help
5	4	3	2	1

4. How helpful have EBCE experiences been in helping students get along with others?

Very helpful				Of little or no help
5	4	3	2	1

5. How helpful have EBCE experiences been in helping students understand more about themselves?

Very helpful				Of little or no help
5	4	3	2	1

6. How helpful have EBCE experiences been in helping students develop their own creativity?

Very helpful				Of little or no help
5	4	3	2	1

7. How helpful have EBCE experiences been in helping students understand the democratic process?

Very helpful				Of little or no help
5	4	3	2	1

8. How helpful have EBCE experiences been in helping students learn how society's values, the government and the economy affect the world of work?

Very helpful				Of little or no help
5	4	3	2	1

9. How helpful have EBCE experiences been in helping students learn how their interests and abilities fit into potential careers?

Very helpful				Of little or no help
5	4	3	2	1

10. How helpful have EBCE experiences been in helping students learn how to find and keep a job?

Very helpful				Of little or no help
5	4	3	2	1

11. How helpful have EBCE experiences been in helping students learn to analyze potential jobs?

Very helpful				Of little or no help
5	4	3	2	1

12. How helpful have EBCE experiences been in helping students improve their reading skills?

Very helpful				Of little or no help
5	4	3	2	1

13. How helpful have EBCE experiences been in helping students learn the basic skills necessary for the careers that interest them?

Very helpful				Of little or no help
5	4	3	2	1

14. How helpful have EBCE experiences been in helping students improve their oral communication skills?

Very helpful				Of little or no help
5	4	3	2	1

15. How helpful have EBCE experiences been in helping students improve their mathematics skills?

Very helpful				Of little or no help
5	4	3	2	1

16. How helpful have EBCE experiences been in helping students know what level of basic skills proficiency is required in the jobs of interest to them?

Very helpful				Of little or no help
5	4	3	2	1

17. How helpful have EBCE experiences been in helping students improve their written communication skills?

Very helpful				Of little or no help
5	4	3	2	1

18. How helpful have EBCE experiences been in helping students become acquainted with a broad range of resources to use in gathering information for work and decision making?

Very helpful				Of little or no help
5	4	3	2	1

19. How helpful have EBCE experiences been in helping students gain confidence in their ability to apply basic skills to complete tasks and solve problems around them?

Very helpful				Of little or no help
5	4	3	2	1

20. How helpful have EBCE experiences been in helping students take responsibility for their own actions?

Very helpful				Of little or no help
5	4	3	2	1

21. How helpful have EBCE experiences been in helping students communicate comfortably with adults?

Very helpful				Of little or no help
5	4	3	2	1

22. How helpful have EBCE experiences been in helping students use information obtained through direct experiences in making decisions?

Very helpful				Of little or no help
5	4	3	2	1

23. How helpful have EBCE experiences been in helping students become more open to ideas and values different from their own?

Very helpful				Of little or no help
5	4	3	2	1

24. How helpful have EBCE experiences been in helping students feel prepared to accept adult responsibilities?

Very helpful				Of little or no help
5	4	3	2	1

25. What factors, if any, have you seen this year that are contributing in a major way to the success of the EBCE program?

26. What obstacles, if any, have you seen this year that are limiting the success of the EBCE program?

27. In what areas do you feel EBCE students have made the greatest growth this year? Why?

28. In what areas do you feel EBCE students have made the least growth this year? Why?

29. What effects, if any, do you feel the EBCE program has had on the regular high school program? Why?

30. What effects, if any, do you feel the EBCE program has had on the community? Why?

31. What changes, if any, would you suggest in the EBCE program for next year?

APPENDIX J

ANOVA and ANCOVA Tables

Comprehensive Tests of Basic Skills (CTBS)

Reading Comprehension			Pretest		
Source	SS	df	MS	F	p
TRT	15.4	1	15.4	0.18	-
Error	7217.3	86	83.9		
Total	7232.7	87			
			Posttest		
TRT	83.1	1	83.1	0.89	-
Error	8025.0	86	93.3		
Total	8108.1	87			
Mathematics Concepts			Pretest		
TRT	0.6	1	0.6	0.02	-
Error	2176.0	86	25.3		
Total	2176.6	87			
			Posttest		
TRT	14.5	1	14.5	0.46	-
Error	2686.8	86	31.2		
Total	2701.3	87			
Mathematics Applications			Pretest		
TRT	0.2	1	0.2	0.01	-
Error	2489.5	86	28.9		
Total	2489.7	87			
			Posttest		
TRT	44.1	1	44.1	1.45	-
Error	2613.6	86	30.4		
Total	2657.7	87			

Student Attitude Survey (SAS) - Part 1

Education - General					
			Pretest		
Source	SS	df	MS	F	P
TRT	59.4	1	59.4	2.03	-
Error	2579.6	88	29.3		
Total	2639.0	89			
			Posttest		
TRT	410.4	1	410.4	23.06	<.0001
Error	1569.3	88	17.8		
Total	1979.7	89			
School Curriculum			Pretest		
TRT	47.1	1	47.1	4.21	<.05
Error	983.9	88	11.2		
Total	1031.0	89			
			Posttest		
TRT	101.4	1	101.4	12.52	<.001
Error	710.8	88	8.1		
Total	812.2	89			
			ANCOVA		
Total	783.7	88			
Error	375.1	87	4.3		
TRT	408.6	1	408.6	95.02	<.0001
				b = +0.58	

SAS - Part 1 (cont'd)

School Resources					
			Pretest		
Source	SS	df	MS	F	p
TRT	144.0	1	144.0	3.82	<.10
Error	3315.1	88	37.7		
Total	3459.1	89			
			Posttest		
TRT	1421.9	1	1421.9	40.17	<.0001
Error	3112.4	88	35.4		
Total	4534.3	89			
			ANCOVA		
Total	4524.0	88			
Error	3091.4	87	35.5		
TRT	1432.6	1	1432.6	40.35	<.0001
					b = +0.08
School Counseling			Pretest		
TRT	8.4	1	8.4	0.49	-
Error	1496.2	88	17.0		
Total	1504.6	89			
			Posttest		
TRT	576.1	1	576.1	33.11	<.0001
Error	1533.8	88	17.4		
Total	2109.9	89			

SAS - Part 1 (cont'd)

Total Learning Environment					
			Pretest		
Source	SS	df	MS	F	p
TRT	868.3	1	868.3	3.44	<.10
Error	22200.7	88	252.3		
Total	23069.0	89			
			Posttest		
TRT	8470.9	1	8470.9	44.47	<.0001
Error	16764.0	88	190.5		
Total	25234.9	89			
			ANCOVA		
Total	25090.2	88			
Error	15835.8	87	182.0		
TRT	9254.4	1	9254.4	50.85	<.0001
				b = +0.20	

Student Attitude Survey (SAS) - Part 2

Career Knowledge					
			Pretest		
Source	SS	df	MS	F	p
TRT	53.6	1	53.6	1.11	-
Error	4241.3	88	48.2		
Total	4294.9	89			
			Posttest		
TRT	525.2	1	525.2	13.78	<.001
Error	3349.1	88	38.1		
Total	3874.3	89			
Career Planning					
			Pretest		
TRT	1.8	1	1.8	0.08	-
Error	1901.6	88	21.6		
Total	1903.4	89			
			Posttest		
TRT	148.1	1	148.1	5.29	<.05
Error	2464.3	88	28.0		
Total	2612.4	89			
Work					
			Pretest		
TRT	35.9	1	35.9	0.32	-
Error	9828.2	88	111.7		
Total	9864.1	89			
			Posttest		
TRT	1231.1	1	1231.1	10.77	<.01
Error	10056.0	88	114.3		
Total	11287.1	89			

Student Attitude Survey (SAS) - Parts 3 and 4

Part 3 - Self			Pretest		
Source	SS	df	MS	F	p
TRT	0.4	1	0.4	0.00	-
Error	10883.6	88	123.7		
Total	10884.0	89			
			Posttest		
TRT	84.3	1	84.3	0.62	-
Error	11895.5	88	135.2		
Total	11979.8	89			
Part 4 - Others			Pretest		
TRT	42.9	1	42.9	0.91	-
Error	4131.6	88	47.0		
Total	4174.5	89			
			Posttest		
TRT	42.4	1	42.4	0.67	-
Error	5535.7	88	62.9		
Total	5578.1	89			

ANS-IE

Locus of Control					
			Pretest		
Source	SS	df	MS	F	p
TRT	1.0	1	1.0	0.04	-
Error	1985.1	88	22.6		
Total	1986.1	89			
			Posttest		
TRT	3.7	1	3.7	0.12	-
Error	2759.3	88	31.4		
Total	2763.0	89			

New Mexico
Career Oriented Activities Checklist
(NMCOAC)

Career Maturity					
			Pretest		
Source	SS	df	MS	F	p
TRT	85.2	1	85.2	1.84	-
Error	3987.7	86	46.4		
Total	4072.9	87			
			Posttest		
TRT	365.3	1	365.3	5.55	<.05
Error	5662.2	86	65.8		
Total	6027.5	87			

JOBS

Total Sex-role Stereotyping			Pretest		
Source	SS	df	MS	F	p
TRT	56.8	1	56.8	2.64	-
Error	1893.4	88	21.5		
Total	1950.2	89			
			Posttest		
TRT	147.1	1	147.1	3.94	<.10
Error	3283.3	88	37.3		
Total	3430.4	89			